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Mind, Brain, and Literature: The Fiction of Iain (M.) Banks

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INTRODUCTION: FRAMEWORK

LIFE SCIENCES, COGNITIVE SCIENCES AND NEUROSCIENCES

The ideas concerning the indispensability of collaboration between scientists and humanists are not new: in 1959, Charles Percy Snow, a British scientist and novelist, published his famous lecture entitled *The Two Cultures*, in which he postulates that the 20th century is permeated by a deepening mutual incomprehension between scholars representing sciences and humanities. According to Snow, the 20th century witnessed the spreading of the belief in the mismatch between materialist and biology-oriented worldview of science on the one hand, and the humanist investigations into socio-cultural themes on the other. The split into the abovementioned “two cultures” has caused, according to Snow, a major hindrance in understanding the world and solving its problems. In a second edition of *The Two Cultures* (1963), however, Snow proposed the emergence of a “third culture”, in which literary scholars would communicate and collaborate with the scientists. Some people would argue that Snow’s “third culture” already exists, others would disagree completely, but one thing is definitely true: since the commercial world success of Stephen Hawking’s *A Brief History of Time* in 1988, some popular books on science have become bestsellers. As Jan Plamper explains, this relatively new phenomenon has contributed to the propagation of scientific ideas in the areas not restricted to science, and has brought inspiration to representatives of various disciplines, literature included. Scientists such as Giacomo Rizzolatti or Antonio Damasio are cited in works in the human sciences “no less frequently than Nietzsche, Heidegger, Derrida, and Foucault were in the 1980s” (225). In other words, life sciences¹, and especially neuroscience², have been seeping into other disciplines³. The popularization of

¹ ‘Life sciences’ is a terminological extension of biology. The concept emerged in the 1980s in order to include young areas or research such as brain science or cognitive psychology (Plamper 8). I am using the term ‘life sciences’ for medicine, neuroscience, psychology, and related disciplines.

² The Merriam-Webster Dictionary defines neuroscience as “a branch of the life sciences that deals with the anatomy, physiology, biochemistry, or molecular biology of nerves and nervous tissue and especially with their relation to behavior and learning”. See: <https://www.merriam-webster.com/dictionary/neuroscience>

³ The rise of pop-science can, among all, be attributed to John Brockman’s New York literary agency, which specializes in natural sciences, and represents the works of neuroscientists such as Marco Iacoboni, Steven Pinker, or Joseph LeDoux (Plamper 223). Alluding to C. P. Snow’s ideas, Brockman proclaimed the

concepts such as Theory of Mind⁴ or mirror neurons proves the current importance of neuroscience, as well as the general rise of interest in the life sciences (Plamper 219-237).

But why have life sciences become so popular? Plamper associates their dominance with the post-postmodern era, as well as with the reaction against the idea of fluid identities and porous borders. It turned out that people desire a solid anchor in the world, a world of vivid and natural relationships (Plamper 225-227). Life sciences grant this sense of security. Nevertheless, the turn can also be perceived as a reaction towards a retreat from Enlightenment ideas and the appreciation of religious fundamentalism. As Daniel Smail puts it:

In an age when biblical literalism is on the rise, when presidents doubt the truth of evolution, when the teaching of evolutionary biology in the United States is being dumbed down and school boards talk seriously about creation science and intelligent design, it is all the more important for historians to support their colleagues in the biological sciences. (11)

In short, life sciences might have gained appeal because they offer straightforward answers to questions concerning human physiological and psychological nature. They also tend to counterbalance the anti-scientific, or religious, sensibilities. But why has neuroscience – a particular branch of life sciences - become so popular? It may be attributed to the fact that in the 20th century, due to advances in biology and computer science, the human nervous system could finally be studied in detail. In fact, the last decade of the 20th century was dubbed the Decade of the Brain (Nalbantian, Introduction 3). Steven Shaviro states:

[R]ecent advances in neuroscience and cognitive psychology have taught us a lot about the brain. This is largely due to new technologies, like fMRI (functional magnetic resonance imaging), first developed in 1992, which allows us to track brain activity in real time; and TMS (transcranial magnetic stimulation), first

existence of a slightly different kind of “third culture”, consisting of “scientists and other thinkers in the empirical world, who, through their work and expository writing, are taking the place of the traditional intellectual in rendering visible the deeper meanings of our lives, redefining who and what we are” (17).

⁴ The use of capital letters is a convention. Theory of Mind is also referred to as ToM. For more information, refer to: Vittorio Gallese and Alvin Goldman, “Mirror Neurons and the Simulation Theory of Mind-Reading”, *Trends in Cognitive Sciences*, 2/12 (1998), 493–501.

successfully used in 1985, which allows us to affect targeted portions of the brain in such a way as to alter a person's feelings, attitudes, and judgments. Through these techniques, together with advances in computing power, we have arguably learned more about the physical functioning of the brain in the past thirty years or so, than we did in all of previous human history. (chap. 4, n.p.⁵)

Developments in research on brain functions have been capacitated by sophisticated technologies. This rapid progress made in the field of neuroscience, combined with the heightened popular interest in the workings of the human brain - and also with the pop-science publishing dynamics - contributed to brain studies gaining an interdisciplinary dimension. As Terence Cave observes:

From these cross-disciplinary dialogues, a number of key strands are emerging: new ways of thinking about language as a cognitive instrument, a significantly different understanding of the relations between perception, affect, imagination, and the so-called higher-order rational functioning of the mind, and (thence) fresh approached to the understanding of the mind-body problem. (13)

To recapitulate, new fields of research such as neuroeconomics, neuropolitics, neuroaesthetics, neuroliterary criticism, or neurotheology have sprung up in the last decades (Plamper 225). To make matters more complicated, these disciplines often draw from the research performed in the field of what is known as cognitive science⁶ - an intellectual movement stemming from the 1950s (Miller 141), when developments in the nascent fields of neuroscience, computer science, and the field of artificial intelligence, caused a growing interest in the workings of the human brain. George A. Miller, one of the founders of cognitive psychology, states that:

⁵ I use the form "n.p." to indicate that in case of this particular reference no page number is given, as the source I use is an electronic one.

⁶ "Cognitive science" is defined by Merriam-Webster as "an interdisciplinary science that draws on many fields (such as psychology, artificial intelligence, linguistics, and philosophy) in developing theories about human perception, thinking, and learning". Neuroscience and cognitive science tend to overlap, as both disciplines focus on the issues related with learning and thought. The boundary between these two is often blurred, and the meeting point of "neuroscience" and "cognitive science" is especially pronounced if we consider the attempts to bridge the gap between the brain and the mind. See: <https://www.merriam-webster.com/dictionary/cognitive%20science>

[B]y 1960 it was clear that something interdisciplinary was happening ... What you called it didn't really matter until 1976, when the Alfred P. Sloan Foundation became interested. The Sloan Foundation had just completed a highly successful program of support for a new field called 'neuroscience' and two vice-presidents of the Foundation, Steve White and Al Singer, were thinking that the next step would be to bridge the gap between brain and mind. They needed some way to refer to this next step and they selected cognitive science. (143)

Even though the mind and the brain have been traditionally considered as different entities -the brain being physical, and the mind incorporeal – the developments in cognitive sciences caused them to become considered as one continuum. Contemporary neuroscientists postulate the existence of the MindBrain (or BrainMind): “a unified entity lacking any boundary within the body” and “integral to the physical system as a whole” (Panksepp and Biven xiii). These concepts may have grown out of a neuroscientific appreciation of Spinoza's philosophy.

By stating that „one of the values of philosophy is that throughout its history it has prefigured science” (*Looking for Spinoza* 15), Antonio Damasio argues that philosophical thought has always been an anticipation of the modern life sciences. One can agree or disagree with this statement, but it is without a doubt that Baruch Spinoza (1632-77) and his ideas have been adopted by modern neurosciences (Plamper 19). Spinoza is now referred to as a monist philosopher, because he believed in a unified divine substance, and rejected the dualism of feeling and soul. In *Looking for Spinoza: Joy, Sorrow, and the Feeling Brain* (2003) Damasio considers Spinoza as a protobiologist, and resorts to pairing neuroscientific research with the philosopher's thought in order to argue for the existence of a biological body-mind and mind-brain unity⁷. In general, numerous neuroscientists became interested with Spinoza's ideas, because they perceived a connection between them and their own research⁸.

Spinoza's thought, partially also due to the popularity of Damasio's book, has recently “experienced a breathtaking renaissance in the study of embodiment in the social sciences, literary studies, and the study of images”, while “the connection in his [Spinoza's] main work, *Ethica: Ordine geometrico demonstrata* (1677), of natural

⁷ Damasio also suggests that emotions are purely biological phenomena, always rooted in the material existence.

⁸ Damasio provides a list of life scientists invoking Spinoza (*Looking for Spinoza* 300).

scientific, geometric reflection with emotional thinking is also a bonus that only adds to his attraction for literary scholars interested in the neurosciences and for neuroscientists interested in literature” (Plamper 19-20).

Put shortly, Spinoza is fashionable in the field of cognitive sciences and neurosciences⁹, as well as among writers in the social sciences and literary studies, who “invoke him so that they might valorize matter ... Matter has feeling and ultimately agency just like the human being; hence matter is also within range of our empathy and deserving of protection”, while “literary scholars are also attracted to monism because it makes possible the embodiment of thought processes” (Plamper 20-21). The retreat towards Spinoza may be symptomatic of the contemporary return towards materialism and rejection of dualism, and it is inherently connected with the rise of popularity of life sciences - dominated by the investigation into the nature of the mind.

In my analyses I shall not delve, however, into a detailed investigation of different scientific approaches applying to the workings of the human brain, mind, or BrainMind: my point is rather to draw attention to the fact that since a few decades, in sciences and humanities alike, a growing focus on the cognitive processes can be observed, and this cross-disciplinary phenomenon leads to a reevaluation of concepts such as memory, emotions, language or consciousness. This fascination with human cognition has entered the public domain, “attracting enormous attention and interest: hardly a day passes without some aspect of cognitive research being reported in the media” (Cave 13). This frequency of such accounts may be Cave’s exaggeration, but – without any doubt - since the human brain has begun to be studied in an in-depth manner, its nature has become more and more puzzling, raising questions such as: how exactly does an absurdly heavy, energy-consuming snarl of nervous tissue create art, technology or the feeling of fear? How does it incite the sense of self? How does it contribute to the emergence of culture?

According to Terence Cave, the current, interdisciplinary dialogue on cognitive phenomena may be regarded as a bridge between C.P. Snow’s ‘two cultures’: “neuroscientists talk to experimental psychologists, who themselves talk to philosophers and linguists; all of them, from their different viewpoints, are capable of throwing light on

⁹ I prefer to use the term “cognitive sciences” and “neurosciences” rather than “cognitive science” and “neuroscience” in order to pinpoint the plurality and diversity in both overlapping fields of research. I also use the term of “brain and mind sciences” as broader and more general.

the immensely complex object of study that we call human thought or human cognition and its products” (16). Literature, regarded by Cave as “the most revealing product and symptom of human cognition, an outgrowth of one of the most fundamental of human cognitive instruments, namely language itself” (14), has also been analysed from the cognitive perspective: memory studies have proven that the functions of the human brain may serve as a “reliable basis for linking literature and the allied arts to the basic human condition” (Nalbantian, Introduction 2), works like *The Memory Process: Neuroscientific and Humanistic Perspectives* (2010) or Steven Shaviro’s *Discognition* (2016) illustrate that written works are nowadays being discussed from the point of view of cognitive sciences, as biological phenomena, such as consciousness, affects or recall, are considered to be involved both in the production and the reception of written works.

Literature has always grappled with the topic of what it means to be human, as it has always investigated the major changes in scientific paradigms, questioned technological advancements, and attempted at predicting how human life can be influenced by these transformations in the future. In the second half of the 20th century, ideas of humanness were changing rapidly, due to the discoveries made in the fields of bio(techno)logy, artificial intelligences, as well as thanks to the developments made in the nascent fields of neuro- and cognitive sciences. Without providing an outline of a cognitive (or neuroscientific) approach capable of offering an analytical framework for literary works, I shall argue that contemporary fiction itself has been influenced by the zeitgeist associated with brain and mind sciences: the rejection of dualism and the turn towards the stability of materialism, as well as the anchors of clear, biological explanations of vague concepts such as “self”, “identity”, “consciousness” or “humanness”. I believe that these scientific and philosophical transformations had in turn an impact on Iain Banks (1954 – 2013): a Scottish writer of both mainstream and science fiction. Banks’ works are, in my opinion, permeated by a vivid fascination with the workings of the brain or the functioning of the mind.

IAIN (M.) BANKS

In 1984, Iain Banks entered the literary scene with the publication of his debut novel, *Wasp Factory*. Characterised as a mainstream work, *Wasp Factory* “reads very much like a blend of supernatural horror and Gothic¹⁰”, states Simone Caroti (9). In fact, Banks’ debut, as well as his next two novels, *Walking on Glass* (1985) and *The Bridge* (1986), were released on the market as mainstream works, but they nevertheless offered generous helpings of elements associated with horror, fantasy, and science fiction (Caroti 9). From the onset of his literary career till its very end, Iain Banks was always intent on imbuing his novels with a bold mixture of narrative styles, genres, and themes. As Simone Caroti observes,

It was only in the wake of *Consider Phlebas*’ publication in 1987, and the opening up of the second main strand in Banks’ writing, that his mimetic and non-mimetic work began to diverge. Iain Banks’ novels started hugging reality a little more closely, whereas his science fiction seemed to become more estranged and complex with every installment. (9)

Thus, with the publication of *Consider Phlebas* (1987), Iain Banks gained a second literary persona - Iain M. Banks¹¹, under whose name the science fiction works began to be published. Macmillan had requested Banks’ to make a distinction between his genre and non-genre novels, and this is when the “M” appeared (Clute 28). Banks was not pleased with Macmillan’s demand: this publishing double became for Banks a “fairly constant source of irritation for being a useful tool in the hands of those interested in keeping SF separate from mainstream fiction” (Caroti 42).

Banks regarded the two dimensions of literary work as more or less equally important. “I try to bring the same skill to both”, writes Banks, “I enjoy writing the science fiction more, not tremendously more. In some ways, the mainstream stuff, for want of a better word, is slightly more rewarding by exactly the same fraction” (Wilson

¹⁰ Banks is often categorised as a Gothic writer. Moira Martingale’s *Gothic Dimensions: Iain Banks – Timelord* (2013) is a posthumous study of Banks offering a holistic reading of all the writers’ works through the lens of Gothic themes and narrative strategies.

¹¹ I am using the form of Iain (M.) Banks whenever I am referring to Banks’ literary output in general, not distinguishing between his science fiction and mainstream works.

n.p.), while Ken MacLeod, Banks' friend and fellow science fiction author, emphasises the fact that genre-bending is a prominent characteristic of Banks' work:

Iain always insisted that he brought the same imagination to bear on his mainstream works as he did on his SF, and that conversely he lavished the same craft and care on his SF as he did on his literary fiction. The only difference, he said, was in the setting and scale. He likened writing literary fiction to playing a piano, and writing SF to playing a vast church organ. (n.p.)

Thus, Banks explores similar topics in both of his parallel lines of writing: "borders between the personae are often bridged and the differentiation between the two is overcome by the overlapping references, themes and motifs he uses between his work" (Colebrook et al., n.p.).

Consider Phlebas (1987) was Banks' first science fiction novel introducing the Culture¹² - a loose federation of intelligent, humanoid species inhabiting the universe. The Culture constitutes a secular and absolutely self-sufficient society, which is run by technology: from artificial intelligences of almost infinite powers, called the Minds, through helpful, commonplace drones, to omnipresent electronic gadgets. The Minds govern the various worlds populated by the inhabitants of the Culture: the artificially designed and created Orbitals, rocky planets, as well as great interstellar ships exploring the universe. Each of the mentioned environments is controlled and monitored by a Mind who is fully sentient and equipped with a distinct personality. The Minds establish contact with the Culture citizens via humanoid or android avatars, as well as through terminals: devices used for sending messages, placing orders or asking questions. Lacking any form of organised government, and maintaining all the power in the hands of the super-

¹² Banks' Culture series consists of nine novels, a novella, and two short stories. Aiming at an appendix to this literary output, Banks made an attempt at defining, or explaining, the cultural, technological and political shape of the Culture itself, which found its realisation in an essay entitled *A Few Notes on the Culture* (1994). I shall refer to this essay when it is relevant - nevertheless I consider it as an early attempt at systematising the information about the organisation of the Culture. What I mean to say is that while the essay was written in the early 90s, and Banks' idea of the Culture constantly evolved for the next two decades. Thus, the non-updated text in question cannot be treated as the base-line for interpretation of more recent works.

As a result, I consider Banks' output as the most reliable source of information about the civilisation in question. Besides, *A Few Notes on the Culture* provides general statements and straightforward facts about the nature of the society, while my analysis focuses more on the presentation and role of characters within Banks' novels, as well as the philosophical ideas that brought the Culture into existence.

advanced AIs, the Culture is a post-scarcity society, in which everyone can have anything, spend their life in any chosen environment, dwelling, climate, clothes, and even in a chosen body. The Culture has solved the problems of mortality, and its citizens are subject to genetic modifications, which eliminate the threat of disease, at the same time making the lives of the inhabitants ultimately more pleasurable. Banks' Culture novels deal mostly with the actions of the Contact department, which oversees the encounters and relationships with alien races. The Contact houses an even more interesting division, the Special Circumstances, which is a "largely secret organization that accomplishes the necessary political and physical dirty work the Culture needs performed in order to pursue its humanitarian goals" (Tim Blackmore 260).

Therefore, after the publication of *Consider Phlebas*, two main strands of Banks' output were his mainstream, non-genre novels, and his Culture science fiction works¹³. By no means, however, can it be stated that there is a clear-cut boundary separating Banks' post-*Consider Phlebas* mainstream and science fiction novels. From time to time, "Banks would infuse some of his mainstream work with non-mimetic elements, just to remind us that we shouldn't relax no matter which of his books we were reading" (Caroti 9). To recapitulate: despite the generic distinctions made within Banks' oeuvre, it can be stated that his literary output resists categorisation. *The Transgressive Iain Banks: Essays on Writer Beyond Borders* (2013) monograph is based upon this premise - "Banks fiction", Martyn Colebrook et al. state, "represents a continued fascination with the transgression of borders and limits, whether technical, cultural, corporeal, national or otherwise"¹⁴ (n.p.). In spite of all the critics' classifications, Banks' fiction stays protean in nature (Caroti 9), and this is its most widely agreed on characteristic.

In *The Culture Series of Iain M. Banks: A Critical Introduction* (2015), Caroti delineates the most prominent and most often mentioned features of the literature written by Banks, and these are:

¹³ In 1993, however, *Against a Dark Background* was published – Banks' first science fiction novel not set in the Culture universe. Thus, in addition to mainstream and Culture science fiction, a third strand of Banks' literary output was created: non-Culture science fiction. To complicate matters even more, Banks' first and only nonfiction book, *Raw Spirit: In Search of the Perfect Dram*, was released in 2003.

¹⁴ The novel *Transition* (2009) can serve as an example of this phenomenon: it was published in the UK under the name of Iain Banks, whereas in the United States it was classified as Iain M. Banks' science fiction novel. Numerous Banks' works defy classifications, containing a bold mixture of themes, styles, and genres.

- Using fantastic tropes and narrative strategies in order to blur the border separating mainstream fiction from science fiction;
- Introducing unreliable narrators, uncertain reality frames, and altered states of mind;
- Fondness of metafiction, intertextuality, and self-referentiality¹⁵;
- Foregrounding the storytelling process, which serves as a game played between the characters in the story, the author, and the reader (31)

All attempts at a holistic criticism of Banks' oeuvre aside, Stan Nicholls importantly notes that Banks' "novels lacking that crucial middle initial are regularly lauded by the literary critics, novels with it are either ignored outside the SF field or curtly reviewed with grudging sufferance", and Christie March quotes his words (81), acknowledging the existence of "a sharp value-judgment distinction between the two sides of Banks' opus from the very beginning" (Caroti 168). Non-mainstream works by Banks are undoubtedly sporadically studied by academics, but it is arguable whether the ones classified as mainstream can be said to be "regularly lauded". As Colebrook et al. state:

Over the course of his career, Banks' work has been traditionally marginalized for a variety of reasons: these include the prominence of his early fiction (especially his debut novel), which has tended to overshadow his later work; his decision to write and maintain himself as a science fiction writer, which has drawn an uncertain response from literary critics; his geographical and political focus on "niche" Scottish concerns or, ironically, that his writing is too removed from such concerns" (*Transgressive Iain Banks*, n.p.).

Thus, according to Colebrook et al., Banks fiction – regardless of the works' categorization - suffers from lack of critical interest¹⁶ (n.p.). Caroti observes that while Banks' science fiction was largely ignored by critics, slightly more attention was paid to his mainstream works. Culture novels were, of course, reviewed in leading science fiction

¹⁵ It should be added that doubles and doppelgangers are very common figures in Banks' works. Several critics point out Banks' doubling practices as a phenomenon characterising his entire oeuvre (March 2002; Colebrook 2010; Macdonald 2013; Jones 2013).

¹⁶ In fact, researching criticism on Banks required browsing through anthologies, journals and various on-line sources, in order to gather a rather limited body of texts, which I could subsequently classify into groups based on the subject and aims of critical discussion. It was a difficult job, as the texts were varied and raising a plethora of topics.

magazines, such as the American *Locus*, or British *Interzone* and *White Dwarf*, but besides reviews and interviews, not much happened in criticism. Nevertheless, it is in my opinion vital to present a short, systematic overview of what has been written on Banks' Culture novels, as they are the primary focus of my analysis.

While for a general overview of criticism of Iain (M.) Banks' oeuvre, one should read *The Transgressive Iain Banks. Essays on a Writer Beyond Borders* (2013) edited by Martyn Colebrook and Katharine Cox, the most extensive synopsis of Iain M. Banks' science fiction can be found in Simone Caroti's *The Culture Series of Iain M. Banks: A Critical Introduction* (2015). In addition to these two major critical publications, the second edition of *The Encyclopedia of Science Fiction* contains a short entry on Iain M. Banks (88), while the Culture series appear in three compendia: *The Cambridge Companion to Science Fiction* (2003), Blackwell's *A Companion to Science Fiction* (2005) and *The Routledge Companion to Science Fiction* (2009). The Blackwell edition contains Farah Mendlesohn's comprehensive and insightful article on *Excession*, but otherwise the Culture itself is mentioned in the companion books only in the form of brief references (244). In *The Routledge Companion*, Paul Kincaid describes Banks as one of the representatives of New Space Opera, as well as one of the foundational voices of British Renaissance (otherwise known as the British SF Boom), who is especially intent on foregrounding the strong left-wing political agenda within the classic space opera frame of his Culture novels ("Fiction Since 1992", 177-179).

Let me elaborate at this point on this classification: Banks' Culture novels are commonly categorized within the space opera subgenre of science fiction, which is characterised by grand, cosmic setting, powerful technology, fast-paced action packed with events that are able to shake the universe. Space opera was often considered as controversial: in 1941, Wilson Tucker defined it as "hacky, grinding, stinking, outworn, spaceship yarn" (qtd. in Caroti 42). This is due to the fact that traditionally, space operas has mostly been "shackled to formulaic plots, and possessed of a simplistically anthropocentric ethos that saw the universe as fundamentally comprehensible by humans because it had been made *for* humans" (Caroti 42). Humans of space operas - as the universe's lawful proprietors - created empires, patriarchies, oligarchies, and other traditional human power structures, whose purpose was to subordinate their alien

enemies. Space opera traditionally operated in strong dualisms, such as: good/evil, male/female, human/alien (Caroti 42-43). The 1960s and 1970s, however, witnessed the rise of New Wave space operas. “Beginning in the mid-‘60s, writers like Samuel Delany, Aldiss, and Harrison had begun re-crafting space opera into renewed shapes”, observes Caroti, emphasising the fact that the vastness of the space opera setting became a playground for the writer’s imagination, allowing it to flourish into complex, aesthetically rich narratives (43).

They also injected previously unknown levels of complexity into their characters’ interactions, casting the intricacies of the human psyche against the background of star-fields, nebulae, and hyperspatial planes of reality. ... It was those renewed shapes Banks found when he began reading science fiction. The writers of the New Wave who dabbled in space opera showed him that it was possible to utilize classic adventure plot structures and explode them to problematize and ultimately reverse the simplistic ethos they underwrote, marrying large-scale action scenes to advanced forms of literary expression. (Caroti 43-44).

In a conversation with James Rundle in 2010, Banks observed that he wanted to imbue space opera with new meanings, and “reclaim it for the Left”, getting rid of the traditionally space operan “ultra-capitalist” of “proto-fascist” message¹⁷ (qtd. in Caroti 44). Put simply, Banks rejuvenated the space opera genre, which was already becoming marginal due to the emergence of modes such as cyberpunk (Langford 170).

In *The Cambridge Companion to Science Fiction*, Gary Westfahl presents a different reading of Banks’ space opera: he refers to the Culture novels not as New Space Opera, but as postmodern space opera. He considers the stories as postmodern, because of their alleged lack of optimism and an inherent sense of humanity’s helplessness in the dark universe dominated by powerful AIs. To Westfahl, Banks’ space opera is an example of the literature of exhaustion, while the Culture possesses traces of a powerful empire in the guise of a utopian, post-scarcity society (Caroti 174). Caroti, however, disagrees with this treatment of the Culture series as a “multiple-installment postmodern narrative”, as well as with the argument that the Culture itself is an “empire-in-disguise”.

¹⁷ Banks openly admitted his atheism as well as leftist political views, while a multitude of his works stem from the era of Margaret Thatcher and John Major, with whose ideology he violently disagreed. This caused Banks’ own left-wing invective to become a crucial element of his literary output.

He associates these ideas with “a misunderstanding of scarcity economics, politics, and ethics”, as:

Empires are, by their very nature, power structures built upon the assumption of a world of consumables that the strongest players within a given civilizational context must hoard in order to (1) keep unruly neighbors at bay and (2) defend their grip on power from rivals inside the empire itself. (175-176)

According to Caroti, the post-scarcity economical and moral premises around which the Culture is built contribute to the fact that it cannot be an empire. Caroti denounces also the arguments that the Culture is a counter-utopian civilisation:

[t]he dilemmas of intervention and interference to which the various characters in the novels have been giving voice since 1987 are not designed to turn utopia to ash, nor do they do so by mistake. The Culture remains visible and meaningful throughout the critical utopian process Banks applies to it; it's the argument itself that lends solidity to the “stateless nation” of the Culture, and the argument is made possible by the postulation of post-scarcity living conditions, without which the race to secure resources would start again and utopia truly would crumble. (176)

While all critics agree that Banks' Culture novels shall be situated within the context of space opera, the Culture is the main hero of an on-going unresolved dispute whether it is an empire, or not; and whether it is actually a utopian, or counter-utopian society. This discussion had its onset in year 1990, which witnessed the publication of Colin Greenland's essay for issue #50 of *Foundation* (Autumn 1990). The article in question focuses on *Use of Weapons*, which Greenland treats as the exploration of space opera in order to “display proper moral and political complexity” (90). In short, Greenland perceives the Culture as a post-scarcity utopia. Undoubtedly, Banks developed the ideas behind the Culture over the course of forty twenty-six years of publishing, consciously building his discourse on the basis of the tension between such tropes as utopia, dystopia, and imperialism¹⁸. Simon Guerrier (1999), David Horwich (2002), and

¹⁸ Colin Greenland is one of multiple critics who analyse the Culture from this particular perspective. Alan Jacobs (2009) is another one perceiving the Culture's drive to influence the universe in the context of imperialism. Jacobs himself seeks for resemblances between the Culture and Bush administration, and

Michael Kulbicki (2009) all associate the Culture with an ambiguous or – using academic terminology – a critical utopia. Most recently, Simone Caroti published *The Culture Series of Iain M. Banks: A Critical Introduction* (2015), where he regards the Culture as a critical utopia whose purpose “which has been embraced at every level in the society, is to help, to reduce or eliminate suffering, to devote its functionally infinite resources and near-godlike technological and productive capabilities to assisting less fortunate civilizations” (113). Caroti states:

The galaxy-spanning utopia of the Culture is ... an engine for the proactive advocacy of decency, non-violence, equal rights for all, and the chance to live a meaningful life irrespective of the circumstances of one's birth. ... [M]indful of the reality that, in a universe without gods, one makes one's own meaning as one goes along, the Culture finds that meaning in its ecumenism; it meddles. (16)

In other words, the Culture intervenes in the existence of less-advanced societies. Sometimes, “the ethics of meddling risk becoming fuzzy, problematic, and stained with blood” (Caroti 17). According to Caroti, Banks' Culture is not utopian, but critical utopian, because the Culture is constantly subject to self-assessment. The novels are focused on those aspects and elements of the Culture, “where the boundary between utopia and dystopia, subjected to the greatest pressures, frays and unravels” (124).

In his work, Caroti engages in a dialogue with critics who have also raised the topic of utopia in the context of Banks' Culture novels. According to him, the most conscientious and precise critic of Banks is John Clute, who was the most intent on analysing Banks' utopian project, and who became truly engaged in the discussion of the ethics of the Culture's interventions (Caroti 105). Caroti refers also to Simon Guerrier,

when he finds these similarities superficial, he declares that in Banks' opinion the Culture deserves expansion throughout the universe. The American model of democracy, on the contrary, does not. Among other critics worth mentioning is Christopher Palmer, who wrote an article for the March 1999 issue of *Science Fiction Studies*, in which he examines Banks' work as well as Dan Simmons' *Hyperion Cantos* series (1989-1997), arguing that the Culture is in fact an empire. Simone Caroti perceives this argument as a highly problematic assumption, as well as comments upon other inconsistencies haunting Palmer's analysis (168-169). Similarly, William H. Hardesty approaches *Use of Weapons* as a counter-utopian text, like Palmer suggesting that the Culture is an imperialistic civilisation. Again, Caroti disagrees with this idea (171-172). I personally do not treat the Culture as a highly imperialist and aggressively interventionist, war-mongering political entity. I agree with Simone Caroti, as well as with Iyaylo R. Shmiley, who emphasized the fact that the Culture is mostly a peaceful society, prone to maintain with other civilisations relationships based on mutual respect, rather than focusing on waging unnecessary wars (62).

who in a 1999 article written for *Foundation*, was among the first to argue that the Culture is a “critical utopia”. Guerrier applies the terminology created by Tom Moylan, who explained that the shared characteristic of critical utopias is “a rejection of hierarchy and domination and the celebration of emancipatory ways of being as well as the very possibility of utopian longing itself” (12). Guerrier traces these qualities in the Culture: most prominently, he observes that the rejection of hierarchy is evident in *The Player of Games*, where the Culture, in contrast to the Empire of Azad, rejects a chain of command and all forms of power- and discipline apparatus (28-29).

Even though Caroti offers an in-depth analysis of Culture’s politics, his arguments are rooted within the tradition of literary criticism. It should be observed, however, that the Culture series tend also to be read – partially or entirely - from a political-cultural viewpoint. In his criticism of Banks’ literary works, Tim Middleton places both the writer’s mainstream fiction and his science fiction within the Scottish context. Middleton argues that by focusing in his Culture novels on the edge of Culture’s physical and ethical sphere, “Banks engages with moral and social concerns which can, if the reader wishes, be related to Scottish culture and society in the late twentieth century” (*The Works of Iain M. Banks*, 6). Caroti treats Middleton’s ideas as relevant, as Banks was always “in favor of Scotland’s independence, and his thinking on how to achieve it informed some of the parameters that gave birth to the Culture”¹⁹ (170).

Some scholars working in the field of politics, economics, and sociology go even further, perceiving the Culture as the possible foundation for actual transformations in our world²⁰. Caroti mentions Thomas Gramstad’s article for the *Laissez Faire City Times* as one very surprising example, in which the scholar argues that the Culture’s utopian socio-economic model is a critique of Randian Objectivism (177). Similarly, Chris Brown, a professor of international relations at the London School of Economics and Political

¹⁹ Banks was a politically adroit thinker, who paid close attention to the matters of his own country, and this is why he is often located among Scottish writers, even though he himself claimed that he is not knowledgeable enough when Scottish literary tradition is concerned, emphasising that he is “part of the English language tradition”, “more influenced by *Catch 22*, *Fear and Loathing in Las Vegas* and *The Tin Drum*, and almost anything by Kafka, than by anything in Scottish literature apart from the single influence of *Lanark*” (Robertson 27).

²⁰ It is crucial to emphasise here that the Culture novels are not an attempt at imagining the future of Earth and humanity as we know it. Neither the Earth is the starting point for its history. Nonetheless, the Culture appears familiar, and I argue that this is due to its characters – the way they are created and presented, with all their propensities, drives, thoughts, emotions, and desires.

Science, published an article on Banks' Culture in *Millenium-Journal for International Studies*. Brown suggests that the Culture is a society whose functioning bears some resemblance with the international and internal relationships of real-world countries (Caroti 177). Caroti concludes his analysis with an observation that "there already is scholarship addressing the Culture not as a literary creation but as a philosophical position, a political argument, and a recipe for future growth here on Earth" (212-213).

MY APPROACH

Taking into consideration the outlined trends in criticism, it can be postulated that there is something undoubtedly universal about the ideas with which Banks' works are imbued - in spite of all the arguments concerning their actual moral and political stance. At this point I would like to refer to one of the most insightful Banks-related pieces of criticism: Farah Mendlesohn's article in Blackwell's *A Companion to Science Fiction* (2005). Mendlesohn concentrates on the complex, convoluted plot of *Excession* as well as the variety of narrative styles within the novel, treating it thus as revisionist space opera and a reconstructionist romantic comedy. According to Mendlesohn, "one is struck by the sheer effrontery of Banks' reconfiguration of space opera and his playful use of language. Against extravagant scenery and epic scale, the choice of modes and moods differs for each section of the novel. This is where Banks' revisioning of what space opera is takes place" (*Iain M. Banks: Excession*, 559). Mendlesohn considers space opera as "the cutting edge of the genre" and "the form that departs most enthusiastically from ... rationalized future" (556), arguing that from the end of 1980s till the beginning of the 21st century, space opera acted as a counterpart to the largely pessimistic and ennui-laden cyberpunk – a dominant voice within science fiction. She argues that:

Cyberpunk was in many ways a betrayal of science fiction: it was pessimistic (postnuclear novels assumed human resilience), it accepted the inevitable victory of the corporatist agenda for the world even when railing against it, and it turned away from the outward-bound project that was SF and into the mind. ... Space opera had never pretended to be plausible ... but it celebrated the human, and its very lack of concern for a realizable future offered a counterbalance to the all too predictable vision of global decay. (556)

This "celebration of the human" which Mendlesohn pinpointed became my primary point of interest, thus encouraging me to focus on this particular topic in the context of Banks' novels. Numerous critics have noted the fact that Banks always pays very close attention to character-building and the presentation of his protagonists. Already in 1990, Lawrence Person published an article in the February issue of *Science Fiction Eye*, where he emphasises Banks' heavy focus on character development, which contributes to the fact

that all Banks' characters, "both major and minor, are sharply drawn and well realized, their actions and attitudes entirely believable within the multi-textured webs of their outlook and motivation"²¹ (33). It could be argued that Banks' novels, such as *The Bridge*, *The Wasp Factory*, *Use of Weapons* possess some characteristics of a *Bildungsroman*, as all of them focus on the psychological growth of their protagonists²².

Banks never refrains from focusing on his characters, and their thoughts, feelings, behaviour, and identity. Literary criticism on Banks is heavily oriented on the narrative strategies he is using in order to achieve this aim: focalisation, stylistic peculiarities, meta- and intertextual referencing. Critics acknowledge the importance of character and narrative creation within Banks' novels, but they rarely connect it with the writer's preoccupation with the "celebration of the human" observed by Mendlesohn. My aim is thus to investigate what this focus on the human means within Banks' oeuvre²³.

As I have already noted, Banks' Culture series tend to be read from a political-cultural viewpoint. Undoubtedly, the fictional reality Banks creates offers an extended commentary of the reality we live in. In the words Iyaylo R. Shmiley:

The Culture novels (as well as sf narratives in general) can be more productively considered as large-scale scenarios or complex world simulations which pursue not only entertainment and aesthetic achievements but also political, social, economic and philosophical hypotheses. Comparing the fictional scenario of a sf

²¹ Nevertheless, Person also analyses the politics present in Banks' early Culture novels, and reads the Culture as a communist society.

²² In the *Concise Oxford Dictionary of Literary Terms*, *Bildungsroman* is defined as "a kind of novel that follows the development of the hero or heroine from childhood or adolescence into adulthood, through a troubled quest for identity" (Baldick 27). The name itself means "formation-novel". When the novel describes the formation of a young artist, as in Joyce's *A Portrait of the Artist as a Young Man* (1916), it may also be called a *Künstlerroman*. In "The *Bildungsroman* and Its Significance", the Russian critic Mikhail Bakhtin argued that the *Bildungsroman* is a novel of self-cultivation, whose crucial theme is physical, psychological, and moral change. Bakhtin observed that the hero of the *Bildungsroman* is not stable, but rather the image of a human being in the process of becoming (16-23). An extensive account of the history of *Bildungsroman* and the premises behind it can be found in Franco Moretti's *The Way of the World: The Bildungsroman in European Culture* (1987). Moretti perceives *Bildungsroman* as the key literary mode of modernity, and as a type of a novel that is predominantly preoccupied with youth. Youth is the symbolic figure for European modernity, explains Moretti, and modernity is "a bewitching and risky process full of 'great expectations' and 'lost illusions'" (5).

²³ The line of interpretation I choose is not closely connected with any of the Banks-related approaches I could access. The difficulty stems from the already discussed sparseness of criticism.

story to historical reality can yield more insights than simply equating elements of the first with those of the second. (63)

Designing “a setting, set of circumstances, society, civilization or even meta-civilization” equals for Banks the opportunity to “highlight whatever message or point you want to make, sweeping away all the clutter that normally comes with reality to focus on the kernel of the issue” (55). This constant drive towards exploring these “kernels” finds its greatest realisation in the Culture series, where Banks’ worldview has got enough space to be developed and illustrated - not only within the scope of one novel, but within a series of works written over decades. Banks acknowledged his aim at “making a point” in the scope of his texts, and I argue that this project finds its fullest realisation within the more or less set frame of the Culture novels.

Thus, in order to discuss Banks’ focus on the human and his preoccupation with universals, I have decided to follow an interdisciplinary method which incorporates within my literary study texts originating from the field of cognitive sciences. This decision grew out of the three following interconnected observations:

- Banks is predominantly focused on the human²⁴;

²⁴ In the context of Banks’ interest in the human, I consider it as essential to raise the topic of transhumanism and posthumanism. There is a conceptual confusion between transhumanism and posthumanism, as both intellectual movements arose in the late 1980s and early 1990s; and both are engaged with similar questions and motifs which aim at moving beyond humanism, as well as reconsidering what it means to be human (Ferrando 438). Both philosophical approaches are also intensely focused on the influence of technologies (438). Banks could be perceived as an avid proponent of transhumanism, which – as Robert Ranisch and Stefan Lorenz Sorgner explain - affirms the radical upgrading of human biology by means of technologies, often referred to as enhancements or augmentations, resulting in the emergence of posthumans: new biological organisms, cyborgs, or digital entities (8). Transhumanism is a contemporary take on humanism - even a form of hyper-humanism, embracing secular Enlightenment belief in reason, technology, and progress (Ranisch and Sorgner 8). Basing on a neo-Darwinian worldview, transhumanists postulate that humans should take evolution in their own hands, and undertake attempts to increase their longevity, healthspan, cognitive capacities, behaviour, and physical traits (13). This idea is permeated by techno-optimism - a conviction that technologies can increase both collective and individual well-being (13). Banks’ works are undoubtedly permeated by an optimistic view on the possibilities offered by technology, and the Culture is transhumanist in its outlook, as it offers its citizens countless possibilities of bodily changes and augmentations improving their biological capacities. Nevertheless, becoming a Culture posthuman involves a grave change in functioning of various biological processes, such as the ones attributed with emotions – as I explain in a relevant chapter. Whether transhumanism has positive consequences becomes thus a matter of interpretation. Posthumanism, however - in contrast to transhumanism - means a break with humanism resulting in the rejection of basic humanist ideas and values. Posthumanists question the concept of a human being, which is for them a dangerous and paternalistic ideological construct. Thus, posthumanists focus on the critique of the humanist ideal of man

- He is often investigating deeply culturally-established terms and metaphors associated with the human being (such as the ones related to emotions, memory, or consciousness) in the process of extrapolating his ideas;
- He is in favour of seeking universal laws and schemes, instead on concentrating upon the specific.

Thus, I treat Iain (M.) Banks' texts as the groundwork of my discussion, which includes close readings of the relevant parts of his works. I look for analogies between Banks' ideas and the ideas present in neuro- and cognitive sciences. I use scientific texts within my literary study as a key: they act as a binding material, which allows me to not indulge in genre criticism or stylistic discussions - but to approach Banks' oeuvre as a unified

as the universal measure of all things, as well as on the critique of exceptionalism. They are post-anthropocentric, and challenge humanism-related concepts rooted in Western culture, such as human/animal, subject/object, nature/culture, man/woman, or body/mind (Ranisch and Sorgner 8). There are emancipatory reasons behind posthumanism, such as feminism or the attempt to transcend anthropocentrism. Posthumanism is also neo-materialist and monistic in nature, drawing from Gilles Deleuze's and Felix Guattari's philosophy. It emphasises embodiment, embeddedness, egalitarianism and monism, as well as assumes that there is no unitary subjectivity (Braidotti 340). Generally speaking, the origins of posthumanism can be traced to poststructuralism, postcolonialism, feminism, and technoscience studies (Nayar 2013, 11-34). Donna Haraway and N. Katherine Hayles's writings were especially influential for the historical development of transhumanism. In 1991, Donna Haraway introduced the idea of a "cyborg": "a matter of fiction and lived experience that changes what counts as women's experience in the late twentieth century" (149). Haraway used the metaphor of the cyborg to explain how our high-tech culture questions dualisms permeating the Western tradition: organism/machine, culture/nature, mind/body, animal/human, etc. (173). In *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (1999), N. Katherine Hayles states that we all are posthumans – whether biologically altered, or non-altered. She signaled "the end of a certain conception of the human, a conception that may have applied, at best, to that fraction of humanity who had the wealth, power, and leisure to conceptualize themselves as autonomous beings exercising their will through individual agency and choice" (286). In spite of an apparently transhumanist outlook on biotechnology, Banks ceaselessly entices the reader to ask what it means to be human, and whether being a human has a value in itself. His novels brim with relatable machine characters and protagonists who belong to non-human sentient species. The Culture itself is a loose, post-anthropocentric federation of beings representing all kinds of shapes. Banks tirelessly dissolves of the discrepancy between humans and animals with the introduction of species such as the Chelgrians (who are mammal-like, but do not physically resemble humans), the insectile Nariscene, or the non-humanoid, elliptical and aquatic Flekke. The categories of gender are characterised by fluidity and plasticity, as all Culture characters can change sex (and shape) whenever they wish. Thus, neo-materialism, monism, embodiment and egalitarianism are all concepts that are important in the context of Banks' works. Haraway's cyborg metaphor could easily be applied to the Culture novels. Similarly, I could refer to Hayles's concept of posthumans devoid of individual subjectivity, autonomy, and agency. The arguments raised in my discussion as well as the conclusions to which they lead, vividly prove Banks' indebtedness to posthumanist ideas. I consider this as an area worth of further analysis. Nevertheless, I continue reading the Culture novels via the lens of cognitive sciences, as posthumanism is closely connected with politics, and it is highly emancipatory in nature. In other words, having chosen a particular cognitive perspective, I decided to refrain from analysing Banks' political stance within the scope of this dissertation.

whole, focusing on persistent ideas and themes which Banks continues to explore. As Banks' main area of focus is the human being - or, as I shall argue, the human mind – brain and mind sciences are particularly handy, and the texts I am using in my discussion are permeated by parallel interests, topics, and ideas. I am aware that such transfers require a simplification of scientific concepts - nevertheless, I believe that the application of cross-disciplinary approach may shed new light upon the novels discussed, as Banks' descriptions of human beings, and especially of the workings of the human mind, may be argued go in line with the discoveries made in the fields of neurosciences and cognitive studies. I am postulating that by paying close attention to the different brain-based processes, such as the ones responsible for memory, emotions or consciousness, Banks aims for providing a large integrative perspective of the human being, which offers a literary phenomenological explanation of what it means to be human. To put it differently, I argue that within his novels, Banks outlines the universal human characteristics. The characters in his novels behave and think like real humans, and hence may be analysed with the application of concepts drawn from the field of brain sciences²⁵.

The scientific texts which I am using as a key to Banks' novels are, too, expressions of monist and materialist philosophy, with which the writer's work is deeply imbued. Banks' focus on the intricacies of cognition, his insistence on the materiality of the human being, and a search for the nature of being human, illustrates a desire to withstand the relativist philosophy and postmodern theories positioning the existence of the decentred subject. In this aspect, I am following the lead of Mendlesohn and Caroti, who see a problem in applying postmodernist critique to Banks' novels: "once we're done taking note of the send-ups, there's still a tale to care about, characters to empathize with, and a place of origin that remains standing throughout and beyond the story told" (Caroti 181). Like Caroti or Mendlesohn, I admit that Banks is on the side of searching for universalities and objective truths. Objectivity is what neuroscientific texts aim for, as well: already in 1894, the neo-Kantian philosopher Wilhelm Windelband made a still valid distinction between nomothetic natural sciences which seek universal laws, and the idiographic human sciences which focus not on the general, but on the specific (Plamper

²⁵ By no means, however, do I wish to argue for the inadequacy of non-cognitive approach as regards Iain Banks' literature - my point is rather to outline a possible new approach to the author's fiction.

7). Banks' works are an attempt at grasping the big picture, getting rid of artificial dualisms, and favouring unification rather than specification.

In terms of the cross-disciplinary approach I am using, I am indebted to Steven Shaviro, whose *Discognition* (2016) has been an example of how fiction can be put together with neuroscience, psychology, and philosophy. In *Discognition*, Shaviro discusses what science fiction novels have to say about the mind, consciousness, or sentience. To Shaviro, sentience is “arguably a matter of generating (or being able to generate) fictions and fabulations” (Introduction, n.p.), while “science fiction narratives can help us step beyond the overly limited cognitivist assumptions of recent research both in the philosophy of mind and in the science of neurobiology” (Introduction, n.p.). In other words, Shaviro's argument is twofold: he perceives the ability to create fictional narratives as a prerequisite of sentience, and he also argues that science fiction narratives may help us understand sentience and cognition better, as well as imagine the future of these phenomena in the light of rapid technological changes. I choose to look at Banks' narratives in order to discuss his characters' mental processes, since, like Steven Shaviro, I believe that focusing on fabulations and fictional narratives may prove a perfect source of information about sentience, raise questions about consciousness, and offer a reflection on the peculiarities of the human mind. Even though Banks' Culture novels are set mostly in the far away future, the characters behave in the way resembling our contemporary human counterparts. This contrast makes their traits even more revealing, as they are operating in a setting devoid of the cultural and political limitations of today. Shaviro refers to science fiction as an art distancing us from everyday frames of reference and automatic cognitive assumptions (chap. 2, n.p.). To him, it is “a kind of thought experiment, a way of entertaining odd ideas, and of asking off-the-wall what if? questions. ... By telling stories, it asks questions about all sorts of things: consciousness and cognition, the future, extreme possibilities, nonhuman otherness, and especially the deep consequences – the powers and limitations – of both our ideologies and our technologies” (Shaviro, Introduction, n.p.).

In the parts devoted to theoretical framework, I often refer to the work of William James (1842-1910), American philosopher and psychologist. James' pioneering work in the field of psychology had a profound impact on the developments made later in the

field²⁶. As neuro- and cognitive sciences are preoccupied with the same subject matter that has been studied in the field of psychology, James' ideas prove useful in the parts of my discussion which provide the history of these concepts on which I focus in my dissertation. These concepts include memory, religion, emotions, consciousness, and the self. I regard it as indispensable to mention James' work in the outline of the history of the abovementioned ideas.

I am also often invoking Sigmund Freud's ideas stemming from the field of psychoanalysis - such as theory of repression, libidinal development, and the tri-partite structure of consciousness. First of all, I consider Freud's theories as important, since his works were one of the first to scientify and materialise phenomena which had been long considered immaterial and transcendent, and which had earlier flourished solely within the domains of philosophy or religion. Secondly, Freud's concepts of the workings of the mind had often been culturally significant, and had influence on contemporary life sciences and humanities alike (as I show within the following chapters - for example in the discussion of the theory of repression, the consolidation theory, and the metaphor of memory as an archive). Both scientists and writers explore whether his ideas are still valid, or otherwise offer reworkings of Freud's theories. I argue that Banks falls within that group.

Antonio Damasio falls within the group of thinkers that are regularly recurring in my analysis. I refer to the following books by Damasio: *Descartes' Error: Emotion, Reason, and the Human Brain* (1994), *Looking for Spinoza: Joy, Sorrow, and the Feeling Brain* (2003), *Self Comes to Mind: Constructing the Conscious Brain* (2010). The usefulness of Damasio's theories is twofold. First of all, he is one of the most influential neuroscientists - his ideas have had profound impact both on science and humanist studies (Plamper 225). In addition to the cross-disciplinary importance of Damasio's work, his writings can be regarded as cross-disciplinary too, as he provides an evaluation of Descartes' and Spinoza's philosophy in the context of neuroscientific discoveries. As my discussion of Banks is also cross-disciplinary, I find it essential to refer to Damasio's ideas. Furthermore, Damasio focuses on phenomena whose analysis I perceive as the key to integrating Banks' oeuvre – that is, emotions, the relationship between the mind and

²⁶ See: Putnam, Ruth. *The Cambridge Companion to William James*. New York: Cambridge University Press, 1997.

the body, consciousness and self. Most importantly, however, in his discussion of the emergence of consciousness, Damasio refers to phenomenon of storytelling, which, according to him, enhances the individual's sense of self and possesses a survival value for whole societies. I believe that in Banks' novels, the creation and sharing of stories is of utmost importance, and therefore I cannot ignore Damasio's work oriented around similar ideas.

In the following chapters, I am referring both to mainstream and to science fiction works of Banks. My approach is holistic, yet Banks' science fiction novels prove to be my main subject of focus²⁷. I perceive Banks' science fiction – the music of “the vast church organ” - as the best extrapolation of the writer's ideas about the world and the human being: the novels are grand in scale, and thus granting a wider, more general perspective. In fact, the main object of my discussion are the Culture novels, as this series of works, in my opinion, illustrates best the message Banks wants to convey. The setting of the Culture novels stays more or less the same, and as a result I find it critically rewarding to follow the developments present within them.

My analysis is divided into five chapters, and subjugated to one central monist and materialist notion: Iain (M) Banks considers mind and brain as one²⁸. I begin the discussion of Banks' thought experiments with a chapter on memory and imagination, perceived as interconnected faculties of the brain. I argue that in novels such as *Espedair Street* (1987), *Use of Weapons* (1990), *The Crow Road* (1992), *Look to Windward* (2000) and *Transition* (2009), Banks examines the way memories function, being intent on revealing the limitations of the widespread tape-recorder or database metaphors of memory. He reveals the mistaken assumptions about human cognition inherent in these

²⁷ It is important to remind at this moment that Banks' mainstream output, including the novels I am focusing on in my dissertation, such as *Wasp Factory* (1984) or *The Bridge* (1986) bears multiple resemblances to his science fiction output. Sometimes, the classification of Banks' novels is impossible, and depends on editors' marketing strategies, as is the case of *Transition* (2009). Banks endowed his novels with fantastic elements, feeling that this strategy opens the doors for a sharper criticism of reality.

²⁸ Taking into consideration Banks' materialist outlook on human beings and their mental functioning, in my analysis I have decided to refer to neuro- and cognitive sciences, which reject the metaphysical dimensions of mind understood as a spiritual phenomenon, “in legacy of transcendental philosophers such as Plato, Descartes, Bergson, and Kant” (Nalbantian, “Introduction” 5). This approach fits well into the context of Banks' ideas, as modern scientists approach the mind from the perspective of atheistic materialism, reducing humans to “neurons, synapses, and general bodily states” (Nalbantian, “Introduction” 3).

metaphors, pointing to the fact that the power of memories does never depend on truthfulness or permanence, but rather on their fragility and proneness to being heavily influenced by imagination. In this chapter, I often refer to *The Memory Process: Neuroscientific and Humanistic Perspectives* (2010), which is a collection of texts following an interdisciplinary approach and linking the neuroscientific research with the investigation of memory in the humanities. With contributions from scientists and humanists, *The Memory Process* connects recent scientific findings with insights from literature and art. The discussion present in the book proves useful in the context of Banks' literature. I also invoke Douwe Draaisma's *Forgetting: Myths, Perils and Compensations* (2015), in which the memory scholar traces the history of most potent myths and conceptions concerning memory, Freud's work included.

In the second chapter I discuss Banks' ideas concerning the cognitive nature of religious thinking and the fear of death. I focus on the following works: *The Wasp Factory* (1984), *The State of the Art* (1989), *Consider Phlebas* (1987), *Excession* (1996), *Look to Windward* (2000), *Matter* (2008), *Surface Detail* (2010) and *The Hydrogen Sonata* (2012). I discuss the workings of the brain allowing for the emergence of religion, which is one of the main topics that Banks regularly raises in his novels regardless of their generic classification. Then, I proceed with explaining the correlation between the fear of death and religious thinking. I am alluding to the following concepts stemming from the field of neuro- and cognitive sciences: the Theory of Mind, hypersensitive agent detection device, and Terror Management Theory. I am reading Banks' works in light of various scientific papers which I perceive as relevant, but a larger part of my discussion in this chapter consists of discussing Banks' novels in the context of ideas drawn from Robert McCauley's book *Why Religion is Natural and Science is Not* (2011) and *The Worm at the Core: On the Role of Death in Life* (2015) by Sheldon Solomon, Tom Pyszczynski and Jeff Greenberg.

By concentrating on the powers of memory, imagination, and religious thinking, Banks points to the fact that people create illusions of the self, or the way the world functions around them, and that these illusions are the inescapable human reality. This is the premise behind the third chapter, in which I analyse the concept of consciousness and that of the self. The nature of consciousness is one of the ideas that Banks explores

regularly in his works. As a foreword and framework to my discussion, I provide a short summary of theories relevant in the context of consciousness and the self, which draws on Susan Blackmore's *Consciousness: A Very Short Introduction* (2005). Next, I discuss *The Player of Games* (1988), arguing that sensations and emotions are for Banks a necessary component of what we call consciousness. In order to introduce this idea, I provide a synopsis of emotion-related notions and theories, in which I refer to Jan Plamper's *The History of Emotions: An Introduction* (2015). I also provide an outline of the approach that I am using in my discussion of Banks' *The Player of Games*, which bases on a theory propagated by Jaak Panksepp in Lucy Biven in *The Archaeology of Mind: Neuroevolutionary Origins of Human Emotions* (2012). In the following part of the chapter, I analyse *Transition* (2009), in which Banks eagerly elaborates on the role active perception plays in the creation of consciousness. I read the novel in light of Antonio Damasio's *Self Comes to Mind: Constructing the Conscious Brain* (2010), as well as in relation to the concept of solipsism. I argue that for Banks, it is not possible to transcend the subjective point of view, which is always rooted in personal sensations and emotions. Sensing, feeling and acting are, therefore, foundations of the self. The discussion of sensing, feeling and acting understood as the prerequisites of consciousness leads me to an investigation of the function of the body in Banks' oeuvre. Via analysing his Culture novels, I explain what Banks has to say on the topic of embodiment, as well as on the relationship between the functioning of the body and the emergence of consciousness. In the final part of the third chapter, I concentrate on *The Bridge* (1986), in order to explain why for Banks dreams are a state of consciousness. I employ the theories proposed by J. Allan Hobson. Whenever my arguments require clarification, I allude to *Excession*, *Look to Windward*, *Matter* and *The Hydrogen Sonata*.

The idea that Banks ceaselessly develops in his Culture novels is peaceful coexistence of biological beings and AIs. Therefore, in the fourth chapter I analyse the differences separating - and similarities connecting - the Culture's sentient machines with the panhuman citizens, some of which I discuss in the preceding parts of this dissertation (in the second chapter I examine religious thinking, fear of death, and drive towards immortality, which the Culture's AIs share with the human beings, while in the third I argue that the cognitive powers of the machines are always embodied). Nevertheless, I

believe that the relationships and connections between AIs and humans in Banks' Culture require a separate, supplementary chapter, which organises the information included in the previous parts of this dissertation, as well as adds new observations. I focus on Iain Banks' *Excession* (1996), supplemented with references to other Culture novels, such as *Look to Windward* and *Surface Detail*. I also briefly refer to the "Descendant", a short story included in *The State of the Art* collection. I often allude to Nick Bostrom's book on artificial intelligence - *Superintelligence: Paths, Dangers, Strategies* (2014), as the ideas outlined in it prove useful and insightful when applied to the discussion of Banks' novels.

I argue that the crucial element of the cognitive similarity between humans and machines is the pan-Cultural propensity for storytelling. The investigation of memory and imagination, religion, immortality and consciousness, as well as the discussion of the cognitive parallels between humans and machines in Banks' novels, leads me to a conclusion that there is one question underlying Banks' literary output: What is humanness? The answer is, according to Banks, the cognitive capacity for language, and, hence, for storytelling. In *Use of Weapons*, *Espedair Street*, and *Inversions* (1998) Banks considers narratives as the building blocks of identity: therefore, I open my discussion with the explanation of how characters' memories contribute to the emergence of self-serving fictions. Having analysed *Use of Weapons* and *Transition*, I proceed to argue that for Banks, humans do not only have an unprecedented ability to create stories, but also to share them and to follow them, no matter whether they are real or fictional. I argue that Banks considers the phenomenon of storytelling as essential for the functioning of coherent societies and the development of culture (religion included). However, as I mentioned in chapter four, not only humans exhibit a universal penchant for narratives: the AIs in Banks' Culture novels do too. In *Excession*, Banks explains that it helps machines to understand organic citizens better, and to empathise with them. The fact that the Culture society values storytelling may be the main reason for the peaceful coexistence (even cooperation) between beings differing so profoundly. In other words, I argue that in Banks' novels the creation of narratives is interconnected with the characters' mental faculties responsible for memory, imagination, or self-awareness. Human cognitive powers amount to this unprecedented ability for storytelling, which is the focus of a vast number of Banks' works. With his focus on human cognitive

processes, in his search for universals, Banks aims for answering a question of what it means to be human – and the answer is creating narratives. The question and the answer form an axle connecting his works. In this chapter, I am – among all²⁹ – referring to Antonio Damasio's *Self Comes to Mind: Constructing the Conscious Brain* (2010) and Steven Shavero's *Discognition* (2016).

²⁹ In the introduction I am mentioning only the works that have an influence on my whole line of analysis. Whenever some other ideas are useful for a particular part of my research, I shall refer to them within a particular chapter, either in the body of text, or in footnotes.

CHAPTER ONE: MEMORY

1.1 INTRODUCTION

In the 1990s, neuroscience of memory has become a highly popular discipline, inciting philosophical debates, as well as contributing to the emergence of contemporary cross-disciplinary research. Recently, memory studies have proven that the functions of the human brain may serve as a “reliable basis for linking literature and the allied arts to the basic human condition” (Nalbantian, Introduction 2). In other words, the portrayal of memory in literature has been analysed in the context of brain and mind sciences. *The Memory Process: Neuroscientific and Humanistic Perspectives* (2010) is a collection of papers which provides multiple examples of such an approach, and I shall refer to the arguments and theories presented within it in my discussion of Banks’ works. I am also invoking Sigmund Freud’s ideas about memory, such as the theory of repression, in order to examine whether Banks in his presentation of memory follows the theories stemming from the field of psychoanalysis. I often allude to Douwe Draaisma’s book *Forgetting: Myths, Perils and Compensations*, in which the renowned memory scholar traces the history of most potent myths and conceptions concerning memory, Freud’s work included.

In the scope of this chapter, I intend to apply an interdisciplinary approach to the chosen works of Iain (M.) Banks, whose literary oeuvre exhibits a heightened interest in the intricacies of remembrance. Thus, I consider the subject of memory as a good starting point for the discussion of Banks’ depictions of cognitive processes. For the purposes of my analysis, I have chosen four novels: *Espedair Street* (1987), *Use of Weapons* (1990), *The Crow Road* (1992) and *Transition* (2009). I shall also briefly refer to *Look to Windward* (2000).

I shall predominantly focus on *Use of Weapons*, treating it as an illustration of Banks’ views concerning memory – views further supplemented by concepts present in other works. In fact, there are perceivable convergences between Banks’ novels discussed in this chapter: in all of them Banks offers in-depth explorations of the workings of a society, while the search for truth and identity is also an easily noticeable motif. So are

stylistic similarities: the use of unreliable narration and traditional literary modes (such as the *Bildungsroman*), or the introduction of parallel storylines.

Use of Weapons (1990) is grounded in two interweaving narratives, both of which form a fractured biography of a man known as Cheradenine Zakalwe, a mercenary recruited by the Culture's Special Circumstances to work as an agent intervening in the politics of less advanced societies. One line of narration offers a recount of the protagonist's past, while the other deals with his present. Nevertheless, the story does not retain chronology, since it is moving backward in time, and involves scattered fragments of Zakalwe's mostly painful memories. Midway through the backward-moving narrative, the reader learns that Cheradenine grew up in an aristocratic family, and was brought up with his two sisters, Livueta and Darckense, as well as his cousin, Elethiomel. The young men engaged in rivalry, and eventually Elethiomel betrayed his adopted family in order to gain political power. Thus, Cheradenine and Elethiomel fought a civil war, and Elethiomel ultimately won due to his cruelty and cunning: he had sent Cheradenine a chair made of Darckense's bones, which consequently forced the general into despair. The second line of narration follows Zakalwe's chosen politically-oriented Culture missions, as well as his mysterious quest to find his sister Livueta and ask her for forgiveness. Not until the last pages of the novel do we learn the whole truth about the man in question: it turns out that the person known as Cheradenine Zakalwe is in fact Elethiomel, who has assumed his cousin's identity having transformed his guilt-ridden memories into self-serving fictions³⁰.

Espedair Street (1987) tells the story of Daniel Weir, a burnt out ex-bass player of the 70s' fictional band Frozen Gold. When Weir begins his autobiographical ruminations, he is a 31-year-old man trying to come to grips with his past. The musician narrates his past life, since he hopes it might help him accept the prospective future, and maybe even find a reason to live. His story breaks down into two parallel lines: one exploring the past,

³⁰ In my discussion of *Use of Weapons*, I shall, among all, refer to Tim Blackmore's 2010 article "Save Now [Y/N]? Machine Memory at War in Iain Banks' *Look to Windward*", in which the author argues that *Look to Windward* contains a conscious commentary on the contemporary culture of memory present in Western societies. According to him, the Culture citizens go to great lengths in order to preserve their remembrances, unaware of the harmful effect this process might have on their identities. Blackmore postulates that Banks juxtaposes the plasticity and fragile materiality of biological memory with the machines' absolute memory. Even though Blackmore discusses *Look to Windward* only, I believe that his arguments are valid in the general context of Banks' Culture novels, *Use of Weapons* included.

and the second one dealing with what is happening in Weir's life at the moment of speaking. Possessing features of a *Künstlerroman*, one of the parallel lines of narration includes the story of the protagonist's upbringing in a working class Scottish family, his early rise to fame and wealth, as well as the oncoming life of sex, drugs, and rock'n'roll. The second line of narration depicts Weir's gradual re-acceptance of his past and roots: having been disappointed with the society, the protagonist finally returns to his family and the communal values he has left behind (Pisarska 175).

Creating identity out of stories, be they personal or collective, is a theme permeating *The Crow Road* (1992) as well. As is the case of *Espedair Street* and *Use of Weapons*, this novel is also organised around a disjointed time scheme, where recollections of the past mingle with narrative of the present (which, in the case of this particular novel, is the year 1990). Most of the narrative follows Scottish student Prentice McHoan; Banks however, lets non-linear threads weave in and out of the story, and makes space for countless flashbacks in order to increase the scope of the narrative. Nothing is being told in a linear fashion, and memories crop up, incessantly incited by other events. A search for truth and identity is present, however, in most of the novel's plot threads. Prentice is moderately religious, and thus he engages in a conflict with his father, a staunch atheist. The protagonist is also unsure about his future (be it in the context of romantic relationships or his studies), but most of all he has to understand, and accept, his family's rich and complicated history. In fact, the main plot thread is concerned with Prentice's attempt at discovering what happened to his uncle Rory, who disappeared 18 years previously³¹.

Memory is one of the main themes of Banks' 24th novel, *Transition* (2009), which consists of six seemingly unconnected narratives taking place in the reality of crisscrossing multiple parallel universes. The time frame of *Transition* covers the years after the fall of the Berlin Wall and just before the "third Fall, the fall of Wall Street and the City, the fall of the banks, the fall of the Markets, beginning on September 15th, 2008" (*Transition* 3). A group of people called the transitionaries are able to wander, or -

³¹ Apart from mentioning family relationships as one of the main themes of the novel in question, Alan MacGillivray (2001) raises the topic of the quest for knowledge and truth in the context of *The Crow Road*. He also pinpoints the theme of religion, whereas Tim Middleton notes that the novel is preoccupied with issues of nationhood and communal identity (1995, 23).

using Banks' terminology - flit between the parallel realities (our own included) by the means of inhabiting bodies of chosen individuals. The transitionaries are under total control of the Concern: an organisation, which is secret, unspecified, and ungraspable in its complexity. Concern makes transitionaries find and assassinate chosen individuals for the multiverse's good and its perpetual improvement. The setting and the scale of *Transition* is characterised by its vastness: even though its complex storyline is set on Earth (to be exact, on a multitude of versions of the planet as we know it), the multiverse reality Banks creates is infused with curious phenomena. The central narrative is delivered by Temudjin Oh, a skilled assassin transitionary carrying out the Concern's orders but being at the same time worried about the moral consequences of his actions. Other parallel plots of *Transition* are concerned with Patient 8262, who hides from the Concern in a hospital, Adrian Cubbish - a greedy drug dealer and financial investor - and the mysterious torturer called Philosopher. Their stories intersect with that of Temudjin Oh - in fact, there are substantial reasons to suspect that all the above-mentioned male characters constitute one, complex subjectivity, which inhabits a variety of different realities. The reader is led through a maze of different versions of Earth: in one, the population is killed by a gamma ray burst, in another China rules the whole planet, there is also a steampunk variation on the contemporary world, and, of course, the representation of Earth of the first decade of the 21st century. I argue that Banks' belief in a strong connection between imagination and memory is especially visible in *Transition*, as the novel itself is thematically preoccupied with the limits of creativity. Via discussing *Transition*, I explain why, according to Banks, the fantastic is always a variation on the real.

1.2 FRAMEWORK: MEMORY AND IMAGINATION

For scientists and humanist scholars alike, memory is an indispensable part of human identity, selfhood and self-knowledge (Nalbantian, Introduction 5). As a multifaceted phenomenon, memory is subject to a diverse range of theoretical approaches, which employ a specific memory-related terminology. Studies concerned with autobiographical memory brought to the forefront the term of episodic memory, which is defined as personal memory of events that are consciously recollected, involving specific details concerning time and place (Nalbantian, Introduction 10). Thus, episodic memory is differentiated from the generic semantic memory of different facts and information devoid of a spatiotemporal context³². In my discussion of Banks' novel, I am focusing on the episodic memories, as the characters' recollections of events from the past are a constitutive part of their selfhood. The autobiographical recollections are also subject to transformations crucial for the novels' plot. As Nalbantian puts it, "episodic memory is fragile, degrades with time, and can even be altered by new context or information", and these factors are what humanists address in analyses of autobiographical memory (Introduction 12).

Other terms important for my discussion include implicit memory, which "allows unconscious recollection to guide perception or action and behaviors" (Nalbantian, Introduction 14), explicit memory, which equals conscious recall, and - most crucially - emotional memory, which crosses the boundary between implicit and explicit memory. Emotional memory engages complex processes involving emotion and cognition. The birth of these terminological distinctions can be attributed to Sigmund Freud's theories, according to which memory is multidimensional, and easily influenced by emotional context (Nalbantian, Introduction 15). In his theory of repression, Freud argues that long-lasting memories are highly emotional. This concept has been especially important for the

³² This distinction has a long tradition: already in 1896, Henri Bergson considered recollections of events in *Matter and Memory* as a higher form of memory, because they retained the personal context of being enmeshed in a specific place and time. Similarly, in *Principle of Philosophy* (1890), William James was mentioning the special intimacy of retrieving autobiographical memories together with the context of its associations. Even though Bergson and James did not use terms such as episodic memory or semantic memory, they created the distinction which prevailed over the years. The phenomena they described were only termed and defined many decades later.

field of memory studies, and proves useful in the context of Banks, for whom emotions and bodily sensations play a crucial role in the memory processes³³.

As Iain Hacking observes, the intensified focus on memory in various disciplines at the end of the nineteenth century was “part of the secular drive to replace the soul with something of which we have knowledge” (251), and this drive found its mode of expression in the developing field of psychoanalysis. Freud’s work was a part of a trend that began the process of materialising and scientifying what was considered elusive and transcendent, belonging earlier to the fields of Cartesian philosophy or religion. It was Freud who proposed the existence of long-term unconscious memories and short-term conscious memories (Nalbantian, Introduction 10). Freud discusses memory in two ways: one is the well-known theory of repression, operating in metaphors such as the recovery of the buried past (Freud 65). Since in 1905 Sigmund Freud published the case story of Dora, a woman allegedly suffering from hysteria due to suppressed memories, repression has become a culturally and scientifically significant concept. As Douwe Draaisma pinpoints, “Freud believed that the healing effect of psychoanalysis lay in the recovery of the memory, in other words in resolving the memory disorder . . . The route to healing led from unconscious to conscious, from hidden to open, from fragmentary to complete” (155).

The idea of repression led to the proliferation of the “recovered memories” movement in the end of the 1980s and in the 1990s. In 1980, Elizabeth and Geoffrey Loftus, cognitive psychologists and experts on human memory, made a survey on human views concerning remembrance. It turned out that the majority of the surveyed individuals believed in permanent storage of experiences and thus the inexistence of forgetting: according to those questioned, forgetting meant in truth “the inability to retrieve what has been recorded” (Draaisma 161). The survey proved that the widespread belief in the endless storage of memories and the potential retrievability thereof exists in spite of all the evidence that memory is a function of fragile biological matter. According

³³ From this perspective, his characters can be compared to the narrator of Marcel Proust’s novels. Attilio Favorini explains how in his critical essay *Proust* (1931), Samuel Beckett is focusing on the corporeality of memory and discussing Proust’s incorporation of the phenomenon of habits in his literary work. Beckett terms habit as “the generic term for the countless treaties concluded between the countless subjects that constitute the individual and their countless correlative objects” (qtd. in Favorini 327-239). Thus, Proust’s habit is for Beckett a body-based memory, which is unconscious, and undergoes recategorisation.

to such an outlook, traumatic memories stay hidden in the unconscious, which phenomenon is termed in the psychoanalytical terminology as repression and explained as “blocking of traumatic memories” (Draaisma 127). The potent idea of memory as an archive of the past can be traced to Freud’s works, as well as to the “one of the longest-lasting and most influential theories in neuroscience research: the consolidation theory” (Silva 41). In line with this scientific idea, the world is being inscribed in the brain via sensory experiencing, and each thing is being catalogued as “useful, interesting, distressing, and important” (Silva 41), uncontaminated by following experiences, nor influenced anyhow by the passage of time. In 2009, Joseph LeDoux and Karim Nader popularised the reconsolidation theory, which challenged the already established consolidation theory³⁴, according to which memory is “gradually fixed over time in a permanent form” (Nalbantian, Introduction 17).

The existence of absolute memory and total recall constitute misconceptions, whereas the theory of memory repression has become subject to scrutiny and criticism fueled by recent neuropsychological evidence (Nalbantian, Introduction 15). As I am explaining further in the course of this chapter, in Banks’ novels the Freudian permanence of repressed memories is inexistent, and so is their potential to be uncovered. Freud’s second recall-related idea - the retranscription of memories, theorized with the use of the *Nachträglichkeit* principle, goes more in line with the contemporary memory-related discourse, and coincides with Banks’ ideas. “*Nachträglichkeit* ... is a term used frequently by Freud but never developed by him into a consistent theory”, Nicola King explains (11). It suggests that memory has a transformative potential, while memory traces could sometimes be remodeled in accordance with novel experiences and circumstances (Masson 207).

Memory “has been shown to become unstable upon retrieval or reactivation” (Nalbantian, Introduction 19), and its power lies, paradoxically, in its flexibility and malleability. Reconsolidation theory brought to the forefront of memory studies the concept of imagination, which itself can be defined as a cognitive process that handles the nonfactual or the counterfactual, creating fictional scenarios that are not corresponding

³⁴ In 1994, consolidation theory was introduced by neuroscientists Larry Squire and Pablo Alvarez. See: “Memory Consolidation and the Medial Temporal Lobe: A Simple Network Model” in: *Proceedings of the National Academy of Sciences USA* 91 (1994): 7041 – 7045.

with the real world: past, present, or future. I argue that the potential of memories to become selected, reconstructed and imaginatively transformed is exploited by Banks, but it should be noted that this is a well-known trope, having a long literary tradition. Already the writers of the Romantic era, such as Samuel Taylor Coleridge or William Wordsworth, point to the fragility of memories, and their connection with both imagination and prospective thinking³⁵. Salvador Dali famously considers memories as labile, fluid, and flexible, being closer to what is now understood to lie within the scope of reconsolidation theory. Dali suggests that memory changes under the influence of dreams, hallucinations, and the ordinary passing of time³⁶, while T.S. Eliot succinctly

³⁵ Alan Richardson explains that the discussion of the relationship between memory and imagination stems from the associationist psychology of the seventeenth and eighteenth centuries, running from Thomas Hobbes, through John Locke and David Hartley. For Hobbes, imagination is “decaying sense”, which means the persistence of sensory images in the mind after their exposition to the senses. These images can stay truthful to the experienced reality, or become rearranged. Nonetheless, they can be cognitively manipulated only if they are stored in memory. Thus, Hobbes concludes that “imagination and memory are but one thing” (qtd. in Richardson 281). Locke called imagination “Fancy”, stated that the “pictures drawn in our Minds, are laid in fading Colours”, and added that “We in our Thoughts, Reasonings, Knowledge, could not proceed beyond present Objects, were it not for the persistence of our Memories” (qtd. in Richardson 282). This means that for Locke, “Fancy” is the capacity of memory to provide the subject with the ideas they stored up. Subsequently, associationist psychology was “significantly revised and extended in Romantic theories of the imagination” (Richardson 278), even though it might appear that the Romantics departed greatly from the associationist ideas. Samuel Taylor Coleridge, for instance, refrains from linking memory to “Fancy”, but establishes a distinction between fancy and imagination instead. To him, fancy is an inferior creative activity, which summons images stored in memory and only recombines them, so that images like a winged horse, or a centaur might come to mind. Fancy is thus “a mode of Memory”, which cannot create anything fundamentally new, but rather manipulates the data supplied by the processes of recall (qtd. in Richardson 282). In contrast to “Fancy”, Coleridge describes “secondary Imagination”, which is truly creative. Instead of recombining the fixed elements saved in memory, secondary imagination deconstructs and recreates materials provided by “primary imagination”, which equals the processes of active and creative perception. Nevertheless, according to Richardson, “secondary imagination, no less than fancy, relies for its materials on memory, only in a remarkably different way, dynamic rather than passive ... In its commerce with imagination, that is, memory must itself be a good deal more flexible and pliant than what the “decaying sense” model of memory informing the associationist tradition would suggest” (283).

³⁶ In his autobiography *The Secret Life of Salvador Dali* (1942), the surrealist portrays the genesis of his 1931 painting *The Persistence of Memory* (317). Dali explains that one evening in Paris, whilst recreating the Spanish landscapes from memory and painting them, he was suddenly perplexed by the image of camembert melting on the table. This image brought him to the concept of malleability of memory and remembered time, which he consequently incorporated in the melting watches visible in his painting. As Nalbantian argues, “*The Persistence of Memory* is self-reflexive — theoretically, about the memory process itself. The painting graphically reveals that reactivated memory can turn a previously consolidated memory back into a productively fragile and labile state again” (“Autobiographical Memory” (267).

observes the inherent connection between past (memory), present, and future (prospective thinking, imagination) in the famous opening lines of *Four Quartets*:

Time present and time past
Are both present in time future,
And time future contained in time past. (n.p.)

The last line may be interpreted as a commentary on the potential of memories to be transformed and updated, depending on the subsequent events in subject's life. Jorge Luis Borges also rejects the metaphor of memory being stored in a warehouse. Instead, Borges offers the metaphor of the mirror, where memory becomes fluid, and transforms into multiple reflections. Borges's concept of constructive memory includes the premonition that the passage of time causes the disintegration of recollections, and only the approximations of memories can be reached. According to Borges, forgetting is a necessary part of the memory process, which consequently engages imagination in the process of recall³⁷.

Recent cognitive sciences returned to the connection between memory, forgetting and imagination. The imaginative modulation of memory witnessed by both Romantic and contemporary writers has been identified by many scientists, as concepts already long-present in literature entered neuroscience. Banks, like the Romantic poets, could not have known the reconsolidation theory while writing many of his novels, as the theory was not yet born at that time. His phenomenological analysis of the workings of memory and their rootedness in the material, bodily sphere of existence, leads him, however, to similar observations that have been made within the scope of life sciences: Banks emphasizes the imaginative aspect inherent in memory, as well as the importance of imagination in the context of recall.

³⁷ In one of his stories, "Funes the Memorious" (1942), Borges describes a man cursed with a boundless memory capacity. This man remembers all the details of his past, such as the forms of clouds on each day of his life, or every detail of his dreams. His memory is for Borges a chaotic garbage heap: in contrast, real and healthy memory processes include selection, forgetting, and imaginative creativity.

1.3 IAIN (M.) BANKS: MEMORY

The last decade of the twentieth century was marked by an especially heightened interest in memory studies. Nicola King argues that as the generations having first-hand experience of the two world wars were dying out, there was a growing demand for reevaluation of history, including the need for an increased focus on “memories of oppression or trauma” (11). Furthermore, the 1990s became the background for the recovered memories movement, which dates back to the publication of *The Courage to Heal* by Ellen Bass and Laura Davis in 1988. This movement incited a heated debate on whether it is possible to unearth long-buried memories of sexual abuse: hypnosis, regression therapy, dream analysis and body-oriented therapy all became popular tools used to bring recall (Draaisma 143-144). Psychologists and scientists’ interest in remembrance grew, and the investigation into the workings of memory was further whetted by the booming fascination with neuroscience present in the late 1980s, and in the 1990s known nowadays as the Decade of the Brain (Nalbantian, Introduction 3).

At that time, the coupling of mind and brain was in fact becoming more and more welcome, as philosophers and scientists alike began to do away with the post-Cartesian dualistic split of a human being into flesh and mind, or a division into matter and soul. Human bodies began to be perceived as purely material: with a sense of self, memories, and dreams being a product of the wildly complex biology. Such an outlook on the human being is vividly present in Banks’ *Use of Weapons*, where a drone tells Zakalwe that his “brain is made up of matter” and “organised into information-handling, processing and storage units” by genes and biochemistry (256)³⁸. Banks argues that if human beings are made solely out of matter, then everything has to be encoded in their biology: emotions and memories included. His characters are heavily body-oriented, and tend to focus on the pleasures of the flesh: they are exponents of hedonistic philosophy, while Banks himself seems to enjoy writing about different functions of the human body, to which,

³⁸ While Banks argues that humans are organisms designed out of very delicate matter, full of imperfections and prone to deteriorate, he also exhorts a belief that matter could possibly form more intelligent, self-conscious and proficient structures. That is why his Culture novels brim with sentient and nearly omnipotent machines: “[t]heir machines could do everything else much better than they could; no sense in breeding super-humans for strength or intelligence, when their drones and Minds were so much more matter- and energy-efficient at both. But pleasure... well, that was a different matter. What else was the human form good for?” (*Use of Weapons* 260).

according to him, belong cognitive processes. Banks, in his in-depth analysis of the protagonists, offers a certain anticipation of ideas which were years later present in the works of cognitive scientists: his perspective goes very much in line with contemporary neuroscientific knowledge, including what is being postulated in relation with memory.

Each remembrance of an event, person, or an object is perceived as a complex memory of sensory and motor interactions, since people “recall contexts rather than isolated things” (Damasio, *Self Comes to Mind* ch. 6)³⁹. The modern cognitive sciences consider sensory experiences as indispensable for memory, and so does Banks: in *Espedair Street*, the most vivid and durable memories of the protagonist are all connected with his visceral experiences. Weir recalls smells, sights, and the sensation of warmth in the house of his friend and band-member, Christine (49), he also shares with the reader the recollections of “the way she moved on stage and the touch of her body” (229). From his adolescent years, Weir remembers “a quivering, terrifying but incredibly exciting, almost sexually intense feeling in my belly as I thought about asking Jean to come with me. It was like the feeling I used to get playing chess in the school” (63). Similarly, in *Use of Weapons* smells, sights and tastes ceaselessly trigger Zakalwe’s recall: for instance, one panorama of a citadel incites his chain of memories concerning numerous citadels he has already visited. Zakalwe’s remembrances are not only connected with strong sensual experiences, but they also incite a direct reaction in his body, be it shivering in spite of heat (5) or feeling “once more the long slow scrape his body had made” (116). As a consequence, Banks wonders whether it is enough to avoid sensually and emotionally competent objects in order to “keep memories at bay” (*Use of Weapons* 253). Zakalwe’s case illustrates Banks’ intellectual investigations, since chairs tend to

³⁹ Antonio Damasio calls this state of matters the “Proustian effect”, and Suzanne Nalbantian adds that Marcel Proust’s literary oeuvre may in fact serve as a perfect illustration of the power of the powerful “sensory memory, associated with the rudimentary engram or fixed, encoded memory trace that appears to enjoy a privileged stability” (“Autobiographical Memory” 259). In *Swann’s Way*, Proust’s narrator famously tastes a madeleine dipped in tea, which instantly reminds him of his childhood stay at the home of his aunt: “the whole of Combray and its surroundings, taking shape and solidity, sprang into being, town and gardens alike, from my cup of tea.” (qtd. in Nalbantian, “Autobiographical Memory” 259). Proust emphasizes that smell, sight and taste can be gateways to vivid recollections. He terms such phenomenon involuntary memories. For him, sensation is intimately connected with memory, and thus with cognitive processes. Nalbantian provides the example of *Time Regained*, in which Proust’s narrator touches the cover of a novel by George Sand, and this triggers a memory of his mother. The color of the book’s binding elicits the recollection (“Autobiographical Memory” 260).

trigger the hero's traumatic memories, and exactly for this reason he always moves them out of the room he is staying in (253). It seems a simple strategy, but proves to be difficult: although Zakalwe voluntarily submits to what could be termed sensory deprivation, new memories are constantly gathered and reconsolidated in his brain, and new objects begin to trigger unwanted recall. In other words, Zakalwe makes an attempt at breaching the process of memory aggrandisement, but, as Banks argues, it is just a tilt at windmills. The body and the brain cannot be fooled. Zakalwe's situation is further worsened by living in a society which cherishes sensory memory, since according to the Culture's ideology, memory equals one of the wellsprings of physical pleasure, and most of the Culture's citizens have their bodies bioengineered in order to produce chemical substances enhancing recall (38).

Banks perceives sensations and emotions as the building blocks of self-awareness, often focusing in his writings on experiences possessing high emotional salience⁴⁰, no matter whether the episodes in question are actually happening or being recalled by the characters. It is consistent with the tendency to assign emotions with special prominence in the context of memory. As Antonio Damasio writes, memories always possess both sensory and emotional content, while the emergence of any emotion involves associations with other events, either experienced directly or transmitted (*Looking for Spinoza* 71, 80, 93).

The first memory Daniel Weir mentions deals with making a cloud out of smoke. This experience fills the protagonist with happiness, "delight", "awe", and "a delicious, frightening feeling of power and tininess together" (*Espedair Street* 1). Weir's strongest memories are always associated with particular emotions: not only positive, but also negative ones. At a certain point in the novel, Weir states: "Never forget the feeling guilty; the constant bass line to my life . . . The crime, the misdeed, is the least important part of it; what counts is the guilt" (12-13). "Reverberating guilt" is also an emotion that both incites Zakalwe's memories, and permeates them (*Use of Weapons* 148). In fact, events equipped with emotional content stay "sharp and fresh" in Zakalwe's memory even after many years have passed. Non-emotionally charged events, however serious they might be, become "dim and vague as something seen through the storm of snow", no

⁴⁰ Chapter 3 of this dissertation is partially dedicated to the investigation of the role emotions play in Banks' novels, and I provide there a broader terminological framework.

matter how recent they are (283). Hence, Banks postulates that the mnemonic impact does not rely on the event itself, but on emotional significance it bears. Therefore, for Zakalwe being shot, or being left for dead, is less memorable than the glimpse of his sister, Darckense, engaging in a sexual intercourse with Elethiomel, whom Zakalwe abhors (184, 338-339).

It is argued that music bears powerful emotional significance, and autobiographical memories are easily triggered by sound. Barbara Tillman, Isabelle Peretz, and Séverine Samson note that human brain appreciates connecting melodies with specific events in life, so that strong links between particular autobiographical episodes and pieces of music can be established. In other words, music serves retrieval, and the more moving a piece is for the listener, the more details of related emotional and personal memories may be brought back. Due to their emotional salience, familiar songs constitute one of the tools which can be used for “probing autobiographical knowledge” (377-386). This brings to mind the case of Daniel Weir, who, already in the opening paragraphs of his narrative and speaking of his ex-girlfriend, states:

Her parents were farmers, in Hampshire; Winchester was the nearest big town. I only remember that because I kept humming 'Winchester Cathedral' all the time, which was pretty ancient even then, and annoyed me almost as much as it annoyed Inez. (*Espedair Street* 2)

Emotionally charged music both enhances Weir’s memory, and leads him through his remembrances, making the man finally “at once relieved and disappointed, and reluctantly resigned to life” (220). As Katarzyna Pisarska pinpoints, “music, therefore, becomes a means of synthesis for the character’s past and present” (189).

Edward S. Casey, an American philosopher, has noted that the human body can be perceived as a container for memories of pain and happiness. To him, body means memory made flesh, since our biology reflects the experience of life and the passage of time (173). Banks also exhibits a view that remembrance engages human body: each of Zakalwe’s scars represents a different episode from his past which can be triggered by just looking at the physical defects or by touching them. During a conversation with his lover, Zakalwe states that scars are “good for... remembering” (*Use of Weapons* 115-

116). Besides, Zakalwe believes in “cell-memory” and something he calls “boneremembered affinity” (287) to such an extent, that when he suffers an almost terminal accident and his body (except for the brain) has to be “regrown”, he mourns the loss of the priceless presence of Darckense, whose bone sliver has been stuck in his chest since many years (129).

Zakalwe’s mourning proves to be unnecessary, since his new flesh still remembers what apparently is no longer present even after the extreme bioengineering treatment: “He paused at a window, looking out, and rubbed absently at a small puckered mark on his chest that was not there any more” (154). Zakalwe’s newly regrown body strongly interacts with his brain, holding the same sensory memories of the past, which serves as an example of Banks perceiving flesh and mind in a holistic manner. In fact, Banks seems to enjoy exploiting and subverting conventional metaphors: in *Use of Weapons*, he plays with what is now associated with consolidation theory and the well-known metaphor of the brain being a passive, celluloid-like recording medium, on which memories can be stored: “Digging deeper, in a way that would not have been possible without the Culture’s training and subtle changes, he found the little running loop of memory that took over from what his brain had already stored” (295). As Douwe Draaisma writes, our ideas about the workings of memory are dominated by metaphors of “conservation, storage and recording” (2), and with the usage of words such as “digging”, “loop” or “stored”, Banks points to the fact that memories are essentially material data. He exerts such views not only in *Use of Weapons*, but also in *Espedair Street*, where a diary serves as a container for things past (7). Similarly, in *The Crow Road* uncle Rory “tried to record everything on the pages . . . straining to make it real for himself, as though he could not believe he had seen and heard and experienced what he had until it was fixed somewhere other than in his stunned brain” (77), while the axis of the novel itself equals Prentice’s engagement in uncovering the truth about his family, hidden in a folder containing Rory’s notes and his old floppy disks (Pisarska 154). In *The Crow Road*, the past is embodied in media (Pisarka 154). Thus, it can be argued that both *Espedair Street*, and *The Crow Road*, with their emphasis on music and diaries, depict contemporary world as a reality of memories “externalised” and “materialised”.

In fact, Banks postulates that the more advanced a civilisation is, the more space and media it needs for memories' storage. His observations stay in accordance with what Andy Clark calls a propensity to invent new technologies in order to "offload memory onto the world", be it in diaries or advanced computer databases (*Being There* 201). The Culture is an ultra-advanced future society in which the bulk of information has become too enormous and too complex to be handled by humans, and this is why the Artificial Intelligences called the Minds, together with sentient drones, manage collective memory of the society. Banks' work proves at this point to be at least partially prophetic, since we have recently entered an age of Big Data, where vast amounts of information can only be analysed by computers and mathematical algorithms. Human beings ceased to be able to make sense out of the heap of knowledge collected in various databases. In the 21st century reality, just like in the Culture, forgetting becomes less and less possible: humans live in a continual present, where nothing is outdated, and nothing gets old. Memories are artificially supported and maintained, they cannot fully deteriorate. In the reality described in *Use of Weapons* this state finds an illustration in the widespread practices of genofixing and retro-aging, which allow individuals to prolong their lives almost indefinitely, while brains continue to accumulate experiences and memories. Thanks to the rejuvenation technologies, Zakalwe has already lived for hundreds of years, and, according to Joseph Norman, the accumulation of memories has a detrimental impact upon Zakalwe's emotional life:

The longer he lives, the more information he will store . . . The effects of this upon someone's emotional development, amongst other things, could be potentially problematic, even devastating, especially – as indicated above – when combined with particularly traumatic memories. (127)

The enhancement of memory brings suffering to numerous citizens of the Culture. Characters tend to express a strong desire to forget, which, unfortunately, does not fall in accordance with the Culture's philosophy, which promotes ultra-advanced technology allowing for artificial "freezing" of memories:

The experience of being frozen and of then being woken up had done nothing to dull his memories; they remained keen and bright. He had rather hoped that the

claims they made for freezing were over-optimistic, and the brain did indeed lose at least some of its information; he'd secretly desired that attrition, but been disappointed ... All his past was indeed present, and everything that had been wrong present too, and correct. (*Use of Weapons* 318)

Use of Weapons portrays Zakalwe's sister, Livueta, attempting to "get away from the burden of her memories" (357), while she is continually tracked down by Zakalwe, who himself speaks of carrying "a terrible cargo" of recollections (333). To phrase it differently: Banks' characters crave amnesia in a world which cherishes remembrance. During the quest for reaching Livueta, Zakalwe finds it repulsive that people are obsessed with building museums and intent on commemorating the tragic past (354). He strives for "his own retaliatory action against the tyranny of memory" by, for instance, destroying the summer house where he had found Darckense having sex with Elethiomel (338-339). Zakalwe's operations, however, appear to be futile. To sum up, *Use of Weapons* illustrates a reality of "too many memories" (22), a futuristic world ruled by unimaginably vast amounts of data recorded and never lost. Banks feared that such a reality may bring harm to human sanity and integrity. According to him, it is natural for memories to be forgotten or transfigured in the human brain. The problem is that modern technologies often prevent it, while the obsession with storage and conservation of remembrances, as well as the erroneous "tape-recorder view" of memory⁴¹ seem to be widespread.

At this point I think a reference should be made to *Look to Windward* (2000), which was analysed by Tim Blackmore (2010) in the context of memory studies. Blackmore mentions one of the Culture's Minds, who has once perpetrated the death of millions of people, and "has the mixed curse and blessing of total recall", which means that over the centuries, the Mind in question has replayed the memories of each single death over and over again, being constantly tortured by it, unable to come to terms with its own existence (262). As Caroti puts it: "Minds don't receive the admittedly mixed blessing of meat memory, which fades and distorts with time. Their recall is instant and permanent, their thought processes everlasting, the cogency and texture of their memories detailed beyond the comprehension of flesh sentients" (159).

⁴¹ See Douwe Draaisma's *Forgetting: Myths, Perils and Compensations*. New Haven, London: Yale University Press, 2015.

According to Blackmore, Banks points to the fact that we are on the right path to create artificial technologies enabling perfect recall. While one could suppose that it may eliminate the problems associated with erasure of memories (which has been historically perceived as one of the shortcomings of the human mind), it in fact could cause another serious problem: “not the lack of memory but the surfeit of it” (263). In *Look to Windward*, Banks also introduces a device called the Soulkeeper, in which one can save the “soul” – or, in other words, the mind-state and all the memories of a subject. Blackmore observes that Banks’ idea of the Soulkeeper is the conscious commentary on the culture of memory present in contemporary Western societies. By making references to the writings of Elizabeth Jelin, Andreas Huyssen, and Paul Virilio, Tim Blackmore argues that the more things slide through the Culture citizens’ hands, the more tightly they want to hold on to their remembrances, without comprehending that such an attachment to the past is detrimental for their identities and further psychological development (264). Blackmore posits that Banks uses the imagery of ruins and architectural relics in order to illustrate that clinging to the past is rarely illuminating, but may rather lead to death and failure: “one needs to remember, but cannot live in memory alone; one cannot survive in life by staring only at death” (266). Holding on to the relics of the past is therefore an unnatural behaviour. There is, in fact, a whole landscape of artifacts in the Culture, whose function is to preserve memories unchanged. Banks constantly toys with the notions of absolute memory, consolidation and total recall, which - despite bearing positive associations in our culture – are counter-productive and could prove detrimental to the psychological well-being. The perseverance of memories in an unchanged form blocks the potential for transformation, imagination, change, and possible progress.

This phenomenon of recovered memories is important for Banks in *Espedair Street*, where Daniel Weir recollects his encounter with a school psychiatrist, who “digs up” memories of the protagonist’s traumatic fifth birthday (110). Interestingly enough, in both *Espedair Street* and *Use of Weapons* Banks’ seem to acknowledge the existence of repression of traumatic memories. Zakalwe constantly strives for regaining memories responsible for his fear of chairs, and tries to remember crucial details of his past. Instead he is “flung out again, swirled away, cast into nothingness, consigned to the oblivion of

the deliberately not-thought thoughts” (*Use of Weapons* 232). It may be argued, however, that fragments of this kind express the author’s insecurity towards knowledge concerning memory. They could make the reader wonder whether Zakalwe is in fact struggling with repression, or rather with a form of forgetting. As Douwe Draaisma writes, the 1990s saw rise of a heated debate concerning the nature of memory. This ongoing discussion engaged academics, psychologists and philosophers:

The questions that had been asked for quite some time already were: does repression really exist? Is it true that painful traumatic events can be driven out of the consciousness? Do they nevertheless continue to influence our acts and experiences from the unconscious? Can memories, through repression, end up in a ‘split off’ part of the consciousness? Can a therapist, using special techniques such as hypnosis or dream analysis, retrieve ‘forgotten memories’? (138)

Up till now, no scientific evidence was found for the existence of repression. In fact, trauma requires recurrence. Painful memories tend to be extremely vivid and durable: suffice it to mention that current diagnostic criteria for post-traumatic stress disorder involve suffering from nightmares and flashbacks, as well as the avoidance of stimuli related to the traumatic event itself (Draaisma 149). In spite of the fact that Zakalwe seems to forget or repress some experiences, he also often desperately attempts at forcing himself to forget about the most painful of memories, which nonetheless keep recurring. The mental pain they cause is so unbearable that Zakalwe tries “to stop thinking about it all by bashing his head up and down, staring at the mad blue sky and hitting his head up-down, up-down off the pale scaly rocks beneath his head where the guano pellets had been swept away” (*Use of Weapons* 176). *Use of Weapons* begins, in fact, with Zakalwe trying to “shove memories away” (5), which finally proves impossible, so that the character has to “resign . . . to them only growing more potent with age” (114).

In truth, however, non-pathological memory is defined by change and forgetting (Draaisma 2). Undoubtedly, this may be disappointing and frustrating, as is the case of Zakalwe:

There was something he'd meant to tell Saaz Inile, but he couldn't remember what that was either . . . The frustration of it made him want to scream sometimes;

to tear the white plump pillows in half and pick up the white chair and smash it through the windows to let the mad white fury out there inside. (*Use of Weapons* 287)

Episodic memories are very fragile. They aggravate, and may even be completely transformed by new experiences or information. Human brain is not a hard drive, and memories have the form of connections between billions of brain cells constituting neuronal nets modulated by chemical processes. As I already argued, memory is substantially enhanced in the Culture; nevertheless, human brains are characterised by their plastic and imperfect nature, which Banks' contrasts with the machines' absolute memory. Tim Blackmore provides multiple examples from different Banks' novels in order to argue that Banks tends to use the imagery of ruins as the metaphor for the ultimate fragility and materiality of human memory (265). In *Use of Weapons* one of the drones reminds Zakalwe that his brain "is made up of matter" and "huge, slow cells", while "an electronic computer is also made up of matter, but organised differently" and "more finely-grained" (256). Therefore, Banks contrasts the biological characteristics of human memory with these of super-advanced technologies, which allow them to store indefinite amount of information and to access them anytime.

Banks observes that trauma reinforces memory. The strongest and most permanent remembrances deal with the most shattering of experiences. In line with the mainstream memory studies, Banks argues that the theory of repression is wrong, and so is the idea of total recall: in non-pathological circumstances, memories, even these most cherished ones, are not at all durable. Even though commonly used metaphors and myths emphasise preserving remembrances completely intact, human memory is far from being an archeological site.

1.4 IAIN (M.) BANKS: IMAGINATION

It may be argued that the transformative workings of memory are illustrated in the form of Banks' *The Crow Road*, where the reader moves ahead in the time of the novel, but is sometimes forced to reevaluate the memories of what they have read before (Craig, *Iain Banks' Complicity* 26). The reconstructive powers of memory are vivid in the case of *Use of Weapons*, where the narration itself is divided into two interweaving streams, in both of which Zakalwe is the focaliser. One stream moves forward in time, and the other uses reverse chronology. Both of them are interrupted by countless memory flashbacks, and reminiscences of reminiscences. This forces the reader to constantly redefine what they have already learned about Zakalwe: in other words, what is happening in the novel's present influences heavily the reader's interpretation of things past. What is more, the narrative has plenty of gaps, which have to be filled in with conjectures and inferences in order to gain coherence and sense. Thus, in *Use of Weapons* Banks plays with reader's beliefs about the workings of memory by questioning its stability and recoverability. The non-linear and complex structure of the novel requires from the reader an active engagement into reworking and reevaluation of what they have read before: in *Use of Weapons* "memories are interpretations, not truth" (*Use of Weapons* 114). They are prone to deteriorate, decomposing into bits and pieces or meaningless debris: to Zakalwe, "only bits of it [memory] came back" (168).

In line with the theory of reconsolidation, memory is something mutable and ever-changing. Previously consolidated remembrances, whenever retrieved, become labile and may be modified. Yadin Dudai mentions three types of scientific hypotheses concerning reconsolidation. In line with the "strong version", "plasticity applies to all the elements of the original memory and may indeed end up in the erasure of that memory", while the "intermediate" and the "weak version" posit that stored elements can be modified only to a certain extent (32). No matter which hypothesis will prove to be true, lability and fragility of memory is nowadays perceived as a fact. Attilio Favorini terms the memory process a "scripting of recollection", which does not reproduce the past, but creatively reconstructs it (318). What is more, these characteristics of memory are not understood as a flaw, but rather as a huge asset: plasticity allows for memory to exhibit adaptive

function, since it enhances imagination and allows for making future prognoses. Paul M. Matthews explains that the role of memory is to provide humans with projections of the future, enabling them to imagine what could happen, and subsequently adapt to these expectations (124). In *Use of Weapons*, Zakalwe's past experiences, like destroying a dam (149), heavily influence his imagination and prospective thinking: he compares clouds in a canyon to "slow waters from a broken dam" (152), and he also begins to perceive defeating his enemy's army in the context of exploding ditches (307). As Silva writes: "the power of our memory systems may lie in their susceptibility to many internal and external factors that constantly update, change, edit, and even bend fact to self-serving fictions" (47). Banks writes:

He saw a chair, and a ship that was not a ship; he saw a man with two shadows, and he saw that which cannot be seen; a concept; the adaptive, self-seeking urge to survive, to bend everything that can be reached to that end, and to remove and to add and to smash and to create so that one particular collection of cells can go on, can move onwards and decide, and keeping moving, and keeping deciding, knowing that - if nothing else - at least it lives. (*Use of Weapons* 145-146)

Indeed, in *Use of Weapons*, Zakalwe turns his memory of things past into a complex, self-serving fiction. He "removes", "adds", "smashes", and "creates", and his urge to do so stems from the need to adapt, and come to terms with his own horrific past. In the last chapter of the novel Banks offers the reader a revelation: the rueful, brave, calm protagonist is not the person we thought he was. He is not Cheradenine Zakalwe, but Elethiomel. Elethiomel steals not only Cheradenine's name, but he reworks and reconsolidates his own memories so that he may assume his foster brother's identity (*Use of Weapons* 363). Of course, it might be argued that throughout the whole novel Elethiomel is "merely posing as the calm, poetically-inclined Cheradenine Zakalwe" (Joseph Norman 125), but I think that it might rather be presumed that Elethiomel truly believes he is Cheradenine, ceaselessly inventing new detail supporting his belief. This happens, for instance, in chapter I where the protagonist confabulates, vividly recollecting the chair's delivery:

It was small and white, and as he took a couple of more paces forwards, as the rest of the people and the hall and the castle and the world and the universe disappeared into the darkness and the silence and he came closer and slowly closer to the chair, he saw that it had been made out of the bones of Darckense Zakalwe. (*Use of Weapons* 349)

These memories belong to the sphere of sheer impossibility, since Elethiomel simply cannot possess such a detailed knowledge.

Zakalwe's memories are extremely plastic and labile. Funnily enough, the search for knowledge and understanding of the past is of utmost importance in the protagonist's life. His quest for truth stems from mistaken assumptions concerning the workings of memory: that is, the belief in the stability of stored memories, the view that truly traumatic things stay hidden somewhere in the unconscious, as well as the idea that memory is related only to things past, and not intrinsically connected with imagination, creation, and prospective thinking.

This connection between memory and imagination is extensively covered in *Transition*: the imaginary settings of the novel are always similar to the world as the readers know it, since the truly alien, strange worlds "are unenvisageable" (75). One of the transitionaries states that "because we cannot imagine going to them, we cannot go to them. But think how relatively limited is the type of world we do visit. For one thing, it is always and only Earth, as we understand it" (375-376). The transitionaries cannot visit worlds wildly differing from the Earth, because they are impossible to conjure their image in their minds. They are limited by their imagination, just the way the writer is: it can be postulated that the idea of transitioning is a metafictional commentary on the creative writing process itself. Everything that the writer can imagine or conjure in their mind is limited to the things they are already familiar with, only with some variation applied to them.

In *Transition*, Banks neglects the possibility of creating fundamentally novel things with the use of imagination, as creative thinking is always rooted in knowledge and memory. Alan Richardson argues that although memory and imagination may seem to be two entirely disconnected phenomena, contemporary research implies that remembering things past and imagining the future constitute complementary functions of one cognitive system. He states that:

[I]magining possible future events and imagining altogether fictive ones would seem to represent different uses to which the same system might be put. More than that, there seems to be a large area of overlap where prospective thinking and modeling fictional scenarios blend into each other. (284)

The idea according to which retrospection and prospection, or imagination, are interconnected in mind and brain has been called the “Janus hypothesis” (Richardson 277). Richardson observes that even though such an approach towards the workings of memory is new in the field of brain and mind sciences, it has long existed in literature. He illustrates his argument with the example of a romantic poet, Samuel Taylor Coleridge, who referred in his writings to the phenomenon called “fancy”, whose function is to summon up images stored in memory and subsequently reconfigure them, so that imaginary figures can be created. A winged horse or a centaur is the creation of fancy, which “cannot create anything fundamentally new; it can only manipulate the fixed counters supplied to it by memory” (282). This is what happens in both the minds of transitionaries, and the mind of the writer, whose role is to conjure the images of new worlds.

In his review for *Strange Horizons*, Adam Roberts argues that the imagery and plot in *Transition* seems “half-hearted”, and that “none of the characters come alive”, while settings and plot solutions prove to be disappointingly cliché. I would like to argue, however, that *Transition* offers a possibility of different reading: the novel can be treated as one thematically preoccupied with exhaustion, exhibiting the pessimistic view that one cannot come up with exhilarating novelty, because every product of imagination is a variation on things already existing. In other words, the power of creativity is not unlimited: Banks encourages the reader to think about how strongly human beings rely on their senses and their memory. In *Transition*, the parallel worlds are clichéd post-apocalyptic ruins or neo-Victorian cities, because they are the only ones humans can perceive and, hence, create. Also, the images and metaphors Banks uses are subject to conscious and constant repetitions: suffice it to mention the balustrade at a Venetian ballroom which is “shaped as tears” and the chandeliers at the same locations which resemble “inverted teardrops” (*Transition* 189). I do not perceive this repetitiveness,

exhaustion, and what one could call as half-heartedness as a matter of coincidence, but rather Banks' conscious choice.

One cannot forget that even though limited in its powers, memory still has an enormous creative potential. Suzanne Nalbantian explains that autobiographical literary data provide endless examples of how memory constitutes an “inherently creative process, amplified by the artist but also operative that way in the ordinary human brain” (“Autobiographical Memory” 271). The connection between retrospection and creative thinking is also visible in the scope of *Espadair Street*: in fact, the title of Banks' novel is at the same time the title of the song Weir composes under the influence of memories (229). In the work in question, the main protagonist understands and accepts the creative powers of memory. He categorises it as “using the experience”, since “if it sees a fast buck to be made out of something that's happened, it'll use it, whether you like it or not” (*Espadair Street* 4). Memory, together with imagination and creativity, serves here pragmatic or even financial purposes. Banks is conscious of the adaptive value of remembrance, which is less about accurate recollections of thing past than about creatively influencing the future.

1.5 CONCLUSIONS

I consider it as essential to provide here a brief outline of the way narration itself reflects (dis)remembering within Banks' works. I have already stated that novels such as *Espedair Street* or *Use of Weapons* possess characteristics of a *Bildungsroman*, as all of them focus on the psychological growth of their protagonists. While *Espedair Street* can be read as quite a conventional and linear *Künstlerroman* following the artist's growth, *Use of Weapons* - with its focus on building Zakalwe's transformed identity and creating his self-serving fiction - could be analysed in more detail as a reworking of the "formation-novel". Whereas a traditional *Bildungsroman* spans across the hero's years of youth until he reaches adulthood, Zakalwe is a couple hundred years old in the *Use of Weapons*, as his life is artificially prolonged by the Culture. Therefore, it could be stated that Banks argues for the existence of an endless process of self-formation, which is not at all dependent on the age of the human being. Psychical and psychological changes are happening all the time, and the process of becoming never ends.

The introduction of fractured and non-chronological parallel storylines in *Use of Weapons* reflects the non-linear workings of memory. Remembrances come and go (very often involuntarily), ceaselessly transformed - and transforming. In other words, memories change themselves under the influence of imagination, while they also change the person remembering⁴². To recapitulate: Banks thoroughly examines the way memories function, and he does not refrain from playing with people's innate expectations towards recall. The enhanced cognitive and emotional salience of memory does not depend on them being true and permanent. Quite the contrary: it is being caused by its creative and imaginative powers. His works contradict the widespread metaphor of memory as a tape-recorder or a database with carefully catalogued images. In Banks' terms, memory, especially autobiographical memory, is closely related to imagination: it is creative, as is illustrated in *Espedair Street*, *Transition*, or *Use of Weapons*.

⁴² More attention could be paid to the reader's role in deciphering Zakalwe's fractured biography, as well as the to the reader's position in the *Bildungsroman*-realm of "great expectations" and "lost illusions", but this issues lie outside of the thematic scope of my dissertation.

CHAPTER TWO: RELIGION

2.1 INTRODUCTION

In the previous chapter, I have argued that in Banks' novels, most potent memories possess emotional and sensory significance. I have analysed what Banks has to say on the metaphor of memory as an archive of the past: in order to do so, I have invoked the consolidation and reconsolidation theory, arguing that Banks plays upon culturally established ideas such as repression and total recall, offering an alternative in the form of the presentation of imaginative modulations of memory of his characters. I have postulated that for Banks it is natural for memories to be forgotten and transfigured with the use of imagination, as this process retains individuals' integrity. I have also postulated that Banks imbues his ideas with a warning that the creative and transformative potential of memories may – unfortunately – be disrupted by modern technologies capacitating an indefinite storage of data.

For Banks, memories constitute the groundwork for re-shaping narratives of the self. Thus, it can be stated that Banks is heavily focused on the development of autobiographical memory. This kind of memory enables for recollecting the past as well as imagining possible future scenarios. It also supports the development of a conscious self. Edwin Fuller Torrey observes that the acquisition of autobiographical memory is essential in order to “fully project yourself into the future, both theoretically and emotionally, using your accumulated experiences from the past” (112-113). There is, however, a dark undercurrent to such cognitive wonders: due to the development of autobiographical memory, humans are able to comprehend death as the end of their own existence.

Fear of death constitutes a motive widely permeating art and literature since their very beginnings. It was the theme of the ancient *The Epic of Gilgamesh*, and has inspired writers ever since. Importantly, the awareness of death has been historically associated with an impetus for religiousness. Thomas Hobbes speculated in *Leviathan* that as the human “hath his heart all the day long, gnawed on by feare of death ... the Gods were at first created by humane feare” (n.p.). In other words, humans can conceive of their death,

but in order to quench the fear of nothingness, they are prone to imagine endless possibilities of post-mortem life.

Thus, the awareness of death, and the consequent drive towards immortality, is speculated to grow out of our interconnected cognitive phenomena - memory and imagination. These inherent ingredients of thinking prospectively could be considered the grounds of religiousness. Other natural cognitive capacities are also argued to cause humans to be religious, as I am explaining in the course of this chapter - the overall argument of which is that Iain (M.) Banks explores the natural, cognitive capacities that cause humans to be religious. I trace the motivators of religious life: more specifically, the cognitive foundations of religiousness as presented by Banks in his novels⁴³. I also focus on Banks' presentation of AIs. They have been compared and contrasted with gods in a line of literary criticism, and thus I believe that this discussion should not be omitted in the scope of this discussion. I argue that the powerful AIs presented by Banks may play the role of gods for the non-technological citizens of the Culture, but, cognitively speaking, they strongly resemble humans - considering their fear of death and drive towards immortality. The idea that the fear of death has a notorious influence on human life can be traced back to antiquity, and is thoroughly examined by Banks, who portrays its proliferation in the societies of the faraway future: among humans and machines alike. I believe that Banks introduced powerful, god-like machines in order to explore how similar they are to humans in the way they perceive, think, and feel about reality, thus emphasising the workings of human cognitive processes.

I am employing the following concepts stemming from the field of neuro- and cognitive sciences: the Theory of Mind, hypersensitive agent detection device, and Terror Management Theory. I analyse Banks' works in the context of various scientific papers which I perceive as relevant, but a larger part of my discussion in this chapter consists of relating to the ideas drawn from Robert McCauley's book *Why Religion is*

⁴³ Apparently, religion is considered by Iain (M.) Banks as one of the most potent products of the brain. It also constitutes one of the main topics that he was preoccupied with in his novels. Nevertheless, throughout his career, Banks always referred to himself as a "militant" or "evangelical" atheist (Joe Norman 38). In fact, he even tends to be allocated alongside New Atheist writers, such as Iain McEwan and Philip Pullman. According to Joe Norman, New Atheism equals "public criticism and debunking of religion, some even going as far as claiming the non-existence of God can be proven, once and for all" (38). Atheism, however, does not exclude the intellectual preoccupation with topics related to religion, nor does it exclude the acceptance of the huge role religiousness has always had to play in the history of humanity.

Natural and Science is Not (2011) and *The Worm at the Core: On the Role of Death in Life* (2015) by Sheldon Solomon, Tom Pyszczynski and Jeff Greenberg.

In my analysis, I am referring to the first mainstream novel by Iain Banks, *The Wasp Factory* (1984), a short story entitled “Piece” (originally published in *The Observer Magazine* on 13 August 1989, later included in a short story collection *The State of the Art* published in 1991), and the following science fiction novels by Iain M. Banks: *Consider Phlebas* (1987), *Excession* (1996), *Look to Windward* (2000), *Matter* (2008), *Surface Detail* (2010) and *The Hydrogen Sonata* (2012). These works, all differences between them considered, deal with the same topic: that is, the nature and function of religiousness.

As already stated in the introduction to this dissertation, *The Wasp Factory* has already been analysed as a Gothic novel⁴⁴, it has also been broadly discussed from the perspective of gender studies⁴⁵, while some critics have also investigated the theme of religion in the context of *The Wasp Factory*⁴⁶. While *Consider Phlebas* has been read as a space-opera or a critical utopia⁴⁷, not much critical attention has been paid to the

⁴⁴ For more information one might refer to David Punter’s *The Literature of Terror: A History of Gothic Fictions from 1765 to the Present Day* (1996) or to Andrew M. Butler’s article “Strange Case of Mr. Banks: Doubles and The Wasp Factory” published in *Foundation: The International Review of Science Fiction*, issue 76 (Summer 1999).

⁴⁵ Berthold Schoene-Harwood offers a developed analysis of gender relations in “Dams Burst: Devolving Gender in Iain Banks’ *The Wasp Factory*”, an article published in *ARIEL: A Review of International English Literature*, issue 30.1 (1999). For further information one may also refer to Paul Kincaid’s “Far Too Strange: The Early Fiction of Iain Banks” published in *Foundation*, issue 42.116 (2013). Both authors also noticed the novel’s indebtedness to the tradition of inter-textuality, pointing to the similarities between Mary Shelley’s *Frankenstein* or William Golding’s *Lord of the Flies* and *The Wasp Factory*, which is a topic worth further investigation, but which stays, nevertheless, beyond the scope of this discussion.

⁴⁶ Sara Martin Alegre suggests that Banks is “taking religion much more seriously than the tone of other aspects of this novel suggests” (202). Joe Norman adds that with *Wasp Factory* “Banks used his violent and deluded protagonist Frank Cauldhame to satirize ... the processes of dogma and indoctrination perceived to be integral to a religious worldview. It was the first of several novels in which Banks would satirize ... the various religious practices and institutions” (41), whereas David Pattie summarises *The Wasp Factory* as following: “a powerless central character erects a framework of rituals which provide both momentary respite ... and a sense of power and control over the world”. While Pattie concentrates mainly on the novel’s Scottishness, which he associates with the topic of entrapment in all-enveloping structures of power (22), I intend, however, to examine the topic of religiousness itself, without considering it as a metaphor of political importance, and following the lead of Kirsty A. Macdonald, who stated that *Wasp Factory* depicts the process of creation a religion of the self (n.p.).

⁴⁷ Christopher Palmer discusses Banks’ novel as an example of the space-opera genre in his article “Galactic Empires and the Contemporary Extravaganza” published in *Science Fiction Studies*, issue 26.1 (1999), while Carolyn Brown analyses *Consider Phlebas* from the perspective of utopia studies in her

presentation of religion itself – both within this particular novel, and other Culture ones. Moira Martingale's, Timothy C. Baker's and Joe Norman's analyses, however, undoubtedly prove that religion is a crucial topic for Banks. The curious thing is that the critics' interpretations differ so greatly, and can be even considered as conflicting⁴⁸. I do not, however, wish to treat the arguments of Norman, Baker and Martingale as contradictory: like Norman, I admit that Banks stays secularist, atheist, and vividly opposed towards any form of institutionalized religion, but at the same time his writings are both concerned with the themes of the innateness and ubiquity of religiousness.

chapter "Utopias and Heterotopias: The 'Culture' of Iain M. Banks" published in *Impossibility Fiction: Alternativity, Extrapolation, Speculation*, ed. Derek Littlewood and Peter Stockwell, Amsterdam: Rodopi (1996). The relationship between Banks' novel and T.S. Eliot's *The Waste Land* is extensively covered by Gary Wilkinson in his article "Poetic Licence: Iain M. Banks's *Consider Phlebas* and T.S. Eliot's *The Waste Land*" published in *Vector*, issue 203 (1999).

⁴⁸ Critics have discussed Banks' engagement with the issues of faith, though they focused upon his mainstream works more than on the science fiction. Moira Martingale's monograph *Gothic Dimensions: Iain Banks – Timelord* (2013) is one of the few writings which contain an exploration of the Culture's relationship with religious belief. Another one is Timothy C. Baker's article "Scottish Fiction and the Invocation of God", in which the main argument is that the Culture's rational system is not fully rational at all, but rather cloaks the elements of the supernatural and spiritual in pseudoscientific thinking (91-117). In complete opposition to these two critics, Joe Norman treats Banks as a true atheist and secularist writer, whose Culture is the epitome of a rationalist society (37-50). Norman contests Baker's and Martingale's arguments, according to which the Culture's Minds "reproduce the logic of God or gods in a symbolic form" (38). He presents *Surface Detail*, *Matter*, and *The Hydrogen Sonata* as texts aiming at rationally deconstructing and debunking supernatural elements, such as Gods, afterlife, or prophetic religious texts (41).

2.2 FRAMEWORK: RELIGION

Religion is ancient. “Religious practices have been a part of homo sapiens life since the beginning of discernable history”, writes Christian Smith (1). “No human society has existed that did not include some religion” (1-2). To put it differently, religion has always been ubiquitous, arising independently in various cultural and historical settings. As Robert McCauley observes, “religious ideas and practices invariably bubble up and persist in human groups” (149-151). Their recurrent and ancient character suggests that there is something universal about them, and there is a tradition of thought which ascribes the origins of gods and religion to the natural qualities of human minds⁴⁹.

The idea of religion as a natural phenomenon has been gaining popularity in the last few decades, thanks to the developments made in the field of brain sciences. Nevertheless, the claim that religiousness is a natural outgrowth of biology, cognition, or psychology, is unusual when juxtaposed with the history of theories of religion. As Smith puts it:

Much of Western social thought, cultural criticism, and social science in recent centuries have portrayed religion instead as unnatural, irrational, and abnormal. Religious beliefs and practices have very often been described as foolish and absurd superstitions based on ignorance, fear, repression, and oppression. Religion is a kind of proto- science indulged by primitives and savages who do not understand how the world really works, says one version of this general approach. Or religion is a fanciful reaction against the fear of death. Or it is the groaning sigh, the palliative opiate of economically oppressed and emotionally resigned people. ... Or some other groundless, contrived, or aberrant malformation. (211)

Smith outlines the history of the theoretical accounts of religion perceived as an unnatural phenomenon. According to him, this line of thought begins with the anticlerical and secular ideas stemming from Renaissance, and later propagated by Enlightenment thinkers such as David Hume, Denis Diderot, or Voltaire. Smith mentions Ludwig

⁴⁹ It is important to note at the onset of this discussion that religion and gods are, undoubtedly, problematic terms, which have been used variably and in very different contexts. I am not attempting at defining religion itself, nor do I focus on specific doctrines or metaphysical beliefs (e.g. “Jesus is God”, “heaven exists”), but I concentrate on the cognitive processes, which induce the emergence of religion. I shall refer to them using the umbrella term of religiousness.

Feuerbach's projection theory of religion, according to which religion is a "human projection into the cosmos of concerns and ideas that have purely human origins – whether psychological, social, economic, political, or otherwise" (qtd. in Smith 212). According to Smith, thinkers like Emile Durkheim, Sigmund Freud, or Karl Marx appropriate Feuerbach's ideas into their own theoretical visions (211-212).

Late 20th century witnessed the emergence of ideas propagated by The New Atheists. Thinkers such as Richard Dawkins and Sam Harris postulate that religion possesses no rational validity, thus having no value for individuals and societies alike. Contemporary scientists disagree, suggesting that rationality is not a criterion for evaluation of cognitive usefulness, since our older brains – serving the function of solving survival challenges – are not built for deliberative cognition and rationality. These are the emotional brains: emotions, in contrast to rational, critical thought, help to avoid dangers and quickly solve burning problems (Asma 4).

This theoretical undercurrent of approaching religion through a lens different than reason, stems, however, already from pre-neuroscience times. Such thinking existed in parallel to the tradition of regarding religion as unnatural and irrational. Already in the 19th century, William James accepted the fact that religion is disparate from knowledge, but still is deeply meaningful, and thus needs an examination of how and why it is justified (Asma 6). In *A Common Faith* (1934), John Dewey admitted that "the religious is any activity pursued in behalf of an ideal end against obstacles and in spite of threats of personal loss because of its general and enduring value" (qtd. in Asma 6). For Dewey, religion constituted an important and universal element of human existence. The different ways of perceiving religion coincided also with developments in emotion-related studies. French existential philosophy challenged the rational/irrational and cognitive/emotional dualisms, coming up with a fresh theory of emotion, which influenced the approach towards religion: no longer equated with the useless and the irrational, religion was considered useful in a personal and interpersonal context (Corrigan 6). Thus, arguing for the universal importance of religion required disposing of dualistic thinking, and abandoning the implication that rationality and reason are the superior elements of human existence. It required the acceptance of the emotional and the intuitive.

The idea that religion is natural and meaningful incited an interest in its origins. Although already in the 19th century Charles Darwin was among the first to imply that religious belief and the “love of deity” may be a result of brain organisation (Torrey 5), it was only due to later developments in research on the human body that a truly new understanding of religion was promoted. To put it differently, theorists took into consideration brain sciences and evolutionary studies, and came to a conclusion that religion is not as relative and as culture-dependent phenomenon as some have thought (Corrigan 7). The developments in the field of brain sciences propagate a view that “belief in God or gods is not some artificial intrusion into the natural state of human affairs. Rather, belief in gods generally and God particularly arises through the natural, ordinary operation of human minds in natural ordinary environments” (Barrett 124).

One of the main cognitive theories concerning religion was proposed by anthropologist Stewart Guthrie, who in *Faces in the Clouds: A New Theory of Religion* (1993) argues that human beings are inherently prone to antropomorphise the world. It means that they interpret ambiguous evidence “as caused by an agent or being an agent itself”, “making the cosmos into the image of people and perhaps other animals” (Smith 215). Psychologist Justin Barrett proposes that the mental tool of “hypersensitive agent detection device” (HADD) is responsible for this phenomenon⁵⁰. Guthrie and Barrett argue that the habitual suspecting of agency is an evolutionary, cautious strategy of survival in a dangerous world, but it also leads humans “to understand things happen for reasons” and “to attribute ambiguous evidence to the agency of ... superhuman powers” (Smith 215-216). Barrett expands his argument in the book *Born Believers: The Science of Children's Religious Beliefs* (2012), suggesting that contemporary developmental psychology illustrates that socialization is not responsible for religiousness. On the contrary, it develops naturally in the minds of children (Smith 216-217).

In *Why Religion is Natural and Science is Not* (2011), Robert McCauley proposes that religious behaviours and beliefs originate as by-products of the natural human

⁵⁰ HADD can be described as a mental mechanism which evolved to detect and subsequently assess the activity of agents in subject's environment (Corrigan 8-9). This mechanism is hyperactive, because it often leads to the detection of falsely positive agents, which do not really act. This detection engages emotions, such as, for example, surprise or fear. These feelings emerge in the process of embodied engagement with the world: for instance, a person walks in a dark forest, and recognises agents in the surrounding. Some of them are, obviously, not really there.

cognitive capacities (154). He argues that religions entail “maturationally natural cognitions”, which he defines as “immediate, intuitive views that pop into the mind in domains where they [people] may have had little or no experience and no instruction” (5). A similar point of view is expressed by Pascal Boyer, who attributes people’s belief in superhuman powers and the proneness to practice religion to the results of evolutionary selection. He refers to Barrett’s idea of HADD, and explains how human brains process information gathered from the environment, how they “make sense of objects and causes, generate myriad thoughts not only about what is but what might or could be, select those ideas and explanations that best fit the constraints of mind and context, and pass them on selectively according to their relative advantages and disadvantages in cognitive transmission” (Smith 218). According to Boyer, religion is not irrational, but is rather built on ideas that are completely natural to the human mind, and thus are transmitted from person to person and across time. Last but not least, in *Minds and Gods* (2006) Todd Tremlin attributes cognitive foundations to religious beliefs and its social practices. He agrees that mental tools such as the HADD and the Theory of Mind Mechanism (ToMM) propagate thinking about gods. While the ADD recognises the presence and activities of agents, the ToMM ascribes various mental states to oneself and other agents in order to interpret their intentions (Tremlin 75). Thus, humans intuitively connect “physical causality to mental causality” (Tremlin 80).

As I have mentioned in the very first paragraphs of this chapter, the processes behind autobiographical memory give rise to the fear of death and the drive towards immortality, which are also associated with religiousness. In 2015, Sheldon Solomon, Tom Pyszczynski and Jeff Greenberg published *The Worm at the Core: On the Role of Death in Life* in which they introduce the concept of terror management theory, according to which the fear of death has a constant impact on human activity, and which builds on Ernest Becker’s claim that people naturally strive for immortality in order to manage the fear of death (Solomon et al., Introduction, n.p.). People are believed to be equipped with the Theory of Mind Mechanism, which makes them aware of themselves as existing in a particular time and place, as opposed to other agents, which are totally disparate entities. The actions of these other agents, however, may be predicted or influenced. Solomon et al. argue that the Theory of Mind allowed for the separation of the “I” from the “you”: in

other words, it coincided with the birth of self-consciousness, as well as the capacity to contemplate the past and the future. According to them, when such highly adaptive cognitive abilities appeared, they incited an ever-acute potential for the terror of death. If one understand that one exists, and that some things are alive while others are not alive, and therefore exhibiting no agency, one is “shackled with the collateral realization that like all living things you will someday die” (ch. 4, n.p.). Solomon et al. agree that the rudimentary religiousness may stem from the natural propensities of the human brain, but they add that it also forms the basis of more complex belief systems (religions) which are the intuitive way of quenching the fear of death - utterly paralysing for a self- and life-conscious creature. Those belief systems, which people have always created, contain a conviction that life must have some continuance. In other words, a conceptual denial of the fact that death is the termination of human existence leads to the creation of immortality: afterlives, in which people continue to exist as spirits or souls, or are reincarnated into other bodies and forms (Torrey 120). Hence, inventing a supernatural world, in which death was not irrevocable, was a vital adaptive step in the evolutionary history of the human being (Solomon et al., ch. 4, n.p.). Since the Terror Management Theory is preoccupied with the human cognitive propensities, explaining the evolutionary and cultural value of faith, as well as covering the topics of immortality and the fear of death in an extensive manner delving beyond the very basic reasons behind religiousness, I consider it as useful for the further discussion of Banks’ novels.

2.3 IAIN (M.) BANKS: RELIGIOUSNESS

The Wasp Factory is narrated from the perspective of Frank Cauldhame, a teenager living on a small, secluded island together with his father, Angus. The story begins when Frank learns that his mad elder brother, Eric, escaped from the asylum and is on way home. While the novel unfolds against the backdrop of Eric's inevitable arrival, the reader learns the story of the main protagonist. Frank was in his early childhood mauled by Saul, his father's beloved dog, and was consequently left severely impaired, with his genitals bitten off and impossible to reconstruct. Frank has no birth certificate and is home-schooled, so he mostly spends time on the island: killing animals (and people), as well as developing a personal religion which consists of complex, cruel rituals. He blasts rabbit colonies with cordite, keeps birds' heads impaled on stakes (proudly called The Sacrifice Poles), and in a post-World War II bunker uses Saul's skull to make telepathic contact with Eric. But Frank's greatest creation is the Wasp Factory: a device comprising of a huge glass-encased clock and corridors aligned with each number on the clock's face. When a wasp is placed inside the Wasp Factory it walks down one of the corridors seeking its way out. It will not survive, however: each of the corridors has a deadly trap at the end, so that a sacrificial wasp may die in flames, perish bitten by a spider, be eaten by a Venus flytrap or meet other equally terrible ends. Frank uses the Wasp Factory to predict the future and to answer questions of ultimate concern. As the novel progresses, the reader learns the truth about main protagonist: surprisingly, he is a girl. The story about Saul's ferocious attack was invented by Angus, a mad scientist who subjected his daughter Francis to chemical treatment in order to make her male. Angus hated women, therefore he made Francis/Frank hate them too – and, as a consequence, believe in an illusion of boyhood.

While *The Wasp Factory* is set in an almost microscopic realm, *Consider Phlebas* deals with the vastness of whole universe. The novel is the first in Banks' oeuvre to introduce the Culture, which in *Consider Phlebas* stays in a state of war with the Idirans - an ancient, warmongering and pious species. The novel's main protagonist is Bora Horza Gobuchul, a human working for the Idirans due to his abhorrence of the Culture. Horza holds that he is on the side of life, messy and violent as it is, because for him, the rule of the machines (even sentient ones) is against nature. He claims that people deprived of

experiencing loneliness, scarcity and pain lack their humanness (26-29). Concerning plot itself, the novel deals with Horza being commissioned with the task of the retrieval of the fugitive Mind, which escaped from an Idiran attack and stays hidden on a neutral planet called the Schar's World. Suffice it to mention that Horza does not succeed, finally becoming himself a small cog in one of the sentient machines.

In *The Wasp Factory*, Frank's island is likewise the world of animated matter: catapults live "breathing with you, moving with you, ready to leap" (27-28), a kite "slices its tail and flexes its hollow bones" (91), and the sea is a personified being purposefully waging war against the protagonist (43). As soon as in the second sentence of his monologue, Frank admits that the Factory "told" him that something was going to happen (7). This might be associated with what Deborah Kelemen and Jesse Bering call "promiscuous teleology" – the propensity for overattributing agency to objects (Kelemen 295-301, Bering 253-262), which is a widespread tendency among children, who "only slightly more readily than their elders in their own incautious ruminations, presume design intentionally imposed on things throughout their natural surroundings" (McCauley 220). From an early age, people want to see things happening for a reason rather than as the result of chance. Similarly, Frank Cauldhame creates a purpose for anything taking place in his vicinity. As a compensation for living a lonely and secret life without any responsibilities, plans, or what could in general be called goals, Frank imagines himself as a powerful young man, the sole proprietor of knowledge about things as crucial as, for instance, the reasons behind his brother's insanity:

The first Mrs Cauldhame, Mary, who was Eric's mother, died in childbirth in the house. Eric's head was too big for her; she haemorrhaged and bled to death on the marital bed back in 1960. Eric has suffered from quite severe migraine all his life, and I am very much inclined to attribute the ailment to his manner of entry into the world. The whole thing about his migraine and his dead mother had, I think, a lot to do with What Happened To Eric. Poor unlucky soul. (*The Wasp Factory* 23)

Frank ascribes to things not only agency, but also intentions and sentience. The Wasp Factory "tells" him things, while sometimes it "does not want the wasp in its first choice of corridor, and lets it crawl back out on to the face again" (121). McCauley notes it grants mental comfort to perceive inanimate things as agents understanding us (81), while

Daniel Dennett mentions everyday instances of appeasing cars, cursing computers or intimidating kitchenware as the evidence for the universal biological urge to treat objects as agents possessing their own desires and beliefs (*Breaking the Spell* 116-117). Creating deities is a natural consequence of such tendencies in human cognition (Slone 120) - it all begins with equipping an agent with counterintuitive properties, and then, a talking tree, an immortal man, or an omniscient machine naturally crops up. In Bank's first mainstream novel it is Frank who assumes that things, such as the Factory, are able to think and possess independent minds. Such beliefs brings him consolation, therefore he equips the device with extraordinary mental qualities. The Wasp Factory becomes a supernatural being capable of predicting future. Also worth mentioning is the fact that the birth of Frank's faith happens with ease in isolated, almost experimental surroundings, with the young man having no contact with priests, theologians or any religious institutions (which further supports the point of religion's naturalness). Frank's religiousness could be attributed to the workings of mental tools, such as the HADD or the Theory of Mind Mechanism.

Humans can interact with gods, and this is what makes gods so enticing. But, whereas human knowledge has its limits, supernatural beings are perceived and represented as possessing complete and accurate information about strategic facts⁵¹. Knowledge is power: this popular saying could sum up the main function of deities. Objectively speaking, in case of *The Wasp Factory*, Frank's knowledge is ultimately limited, since he is unsure about both his past and his future, does not have good contact with his brother, and his father keeps a mysterious locked room just beyond reach. Frank suffers from knowledge deprivation. He admits to having been tutored by his father, who found it amusing to teach him nonsense: "My father once had me believing that the earth was a Mobius strip, not a sphere" (*The Wasp Factory* 12). Young Frank believed Angus, and unwittingly shared such information with family and acquaintances – to his utter shame, and their amusement.

It may be argued that Frank poses as an omniscient deity in order to compensate for gaps in knowledge, fatherly lies, and existential uncertainty. For the lack of strategic information about himself, Frank creates his own image as an almighty hero possessing

⁵¹ See: Boyer, Pascal. 2001. *Religion Explained: The Evolutionary Origins of Religious Thought*. New York: Basic Books.

superpowers: a man who killed three individuals and is the only one to know the truth about their fate. Todd Tremlin writes that supernatural, omniscient beings tend to be constructed as possessing a moral perspective on people's inner convictions and their behaviour (117). As if he were a god, Frank punishes wrongdoings: after his cousin Blyth incinerates Eric's rabbits, Frank ruthlessly murders him, believing that Blyth's death is "a judgment from God" (*The Wasp Factory* 41).

The actions of gods are supernatural, yet they stay social. Thus, gods may be perceived as a part of human earthly sphere: accessible and prone to engage in people's everyday existence. Such a belief grants sense to activities like prayer, ritual, or sacrifice. The interaction between gods and people is "characterized by giving and receiving, by promises and protection, by reward and punishment" (Tremlin 113). On the one hand, Frank feeds the Factory with wasps in order to receive answers, guidance and protection. On the other hand, Frank, being himself a master of the island, punishes wrongdoings and attempts at protecting his insane brother by performing himself complicated rituals involving Saul's skull and the Wasp Factory. The Factory itself comprises of a huge clockface, which once belonged to the Bank of Scotland. Maureen Speller pinpoints its importance as a doubled symbol of order (28): ritual allows Frank to keep things under control, because it forms a "defensive wall" around him (Kincaid, "Far Too Strange" 25-26). However, while humans might have a natural predilection for ritualistic behaviour (McCauley 150), scientists suggest that all rituals are meaningless, while people only arbitrarily tack meanings to them. Frank's actions may be argued to illustrate this phenomenon: he constructed the Factory using specific materials in a specific configuration, which would not disrupt his obsessive-compulsive need for symmetry. Similarly, he killed Esmerelda to fulfill his ritualistic drive towards maintaining order:

I could feel it in my guts, in my bones; I had to. It was like an itch, something I had no way of resisting, like when I walk along a pavement in Porteneil and I accidentally scuff one heel on a paving stone. I have to scuff the other foot as well, with as near as possible the same weight, to feel good again. (*The Wasp Factory* 88)

Frank's actions seem meaningless. He makes sudden decisions, even in case of such grave matters as killing his cousins. At the same time Frank deeply believes that man

possesses a place and purpose in a larger, cosmic pattern (*The Wasp Factory* 117). His rituals are supposed to bring him knowledge and power, therefore he imagines the Wasp Factory as a mediator, a supernatural force which is responsible for his convictions and events happening around him. This goes in line with Boyer's argument that ideas about gods follow from rituals, and not the other way round, as was until recently believed. Boyer suggests that supernatural beings are added to ritualistic behaviours, because they fill the gap between the ritual and its supposed effect (237).

Rituals are considered the bedrock of human culture: they "empower us to sustain life, forestall death, and manage the universe ... They determine who we are ... [They] help manage existential terror by superseding natural processes and fostering the illusion that we control them" (Solomon et al., ch. 4, n.p.).

According to Banks, it is thus natural and easy to be superstitious⁵². The human mind does not readily accept coincidences and a prevailing lack of sense as well as the lack of individual agency. Counterintuitive, reflective thinking is essential in order to dispose of the illusion that nothing is coincidental, and that our individual actions really matter for the universe. In *The Wasp Factory*, through immersing the reader in Frank's psyche, Banks points to the fact that our brain may be perceived as the centre of our universe, for it receives and organises all sensations. It gathers perceptions of the world and one's self-image. Banks seems to suggest that the brain generates images of what men assume the world to be. At the same time, this magnificent organ is extremely susceptible to illusions – it makes automatic, unconscious inferences which shape our experience (McCauley 43). Frank's brain provides him with an illusion of fierceness, knowledge, power and agency. Paul Kincaid observes that "all Frank's violent masculinity seems to be compensation for his emasculation, except that we learn this never happened" ("Far Too Strange" 29-30). Most importantly, the Wasp Factory turns out to be a meaningless fraud, but there are other numerous illusions that Frank falls victim to. Henry Wellman explains that young children do not grasp the fact that other

⁵² In "Piece", Banks states the following: "[R]eason shapes the future, but superstition infects the present. And coincidence convinces the credulous. Two things happen at the same time, or one after another, and we assume there must be a link; well, we sacrificed a virgin last year, and there was a good harvest. ... Dung beetle thinking. Life is too complicated for there not to be continual coincidences, and we just have to come to terms with the fact that they merely happen and aren't ordained, that some things occur for no real reason whatsoever, and that this is not a punishment and that is not a reward" (*The State of The Art*, n.p.).

people's representations of reality may be false (qtd. in McCauley 78-79), and this might be the case of Angus, making young Frank believe in curious shapes of planets, but also forcing his son into a bit more influential conviction about being castrated by a vicious dog. These illusions comprise Frank's worldview, shaping both his consciousness and his sense of self for many years ahead.

Consciousness is the inescapable human reality - from the neuroscientific perspective people are born dualists, because they are able to discern agents from passive objects and to ascribe thoughts, emotions and intentions to other individuals. In the Kantian and Cartesian philosophical tradition, thoughts have been traditionally attributed with an abstract, immaterial quality, and mind has been perceived as something both immaterial and superior to the body. While it is not difficult to admit that the body is an entirely physical entity, somewhere beyond it lurks an unshakeable conviction that there is more to man than mere matter – a special power of the “mind” or the “soul” that transcends physicality. Edward Slingerland argues that humans are unwilling to accept the fact that thoughts and ideas are all products of the material body, while the belief in the separateness and superiority of the mind is in fact an illusion created by the biological brain itself, or, to phrase it otherwise, an adaptive evolutionary solution (25).

In his discussion of divided selves, Paul Kincaid postulates that in *The Wasp Factory* “every member of the Cauldhame family seems to be both damaged and doubled” (“Far Too Strange” 29). Frank has his mirror in Eric, Angus in Agnes, and little Paul in Old Saul. While Kincaid attributes this dividing and doubling to the tradition of Scottish fantastic in which reality and fantasy are of equal importance, I argue that it also belongs to Banks' ruminations on, quite literally, the nature of human psyche and its predilection towards dualistic thinking, as well as the penchant for creating a personalised illusion, which is widely known as the “conscious self”. Kincaid is right to state that “because *The Wasp Factory* shows us only one reality, as alienating and disconcerting as that may be, the question of which reality is privileged does not arise” (“Far Too Strange” 35). The mind is able to create deities - and even though they may be termed as fantasy, they are inescapably real, as well.

Humans are believed to possess the Theory of Mind, which allows them to understand any story “in terms of agents, their states of mind, and the sequences of their

actions” (McCauley 185). The Theory of Mind is a tool used to integrate divergent experiences into a coherent narrative of our life, to “forge our sense of self”, understand the past, and predict the future. It also underlies the creation of myths, in which things often become agents acting in a rational and intentional manner (McCauley 185-186). According to Merlin Donald, myths allow for making sense of our experiences (347, 368), while religions usually traffic in mythical narratives (McCauley 185-186).

In *The Wasp Factory*, Frank creates numerous personalised myths: he arranges various, often disconnected, events from his, Angus’s and Eric’s life, as well as things of mere chance happening on the island into a coherent story which he understands in terms of agents and their mind-states. He creates a myth of the Wasp Factory, as well as the myth of himself, because it helps him to cognitively integrate the chaos and brutality of experience. What is more, Banks seems also intent on showing the reader the power of mythical story-telling: he makes Frank’s highly improbable narrative absolutely real and plausible. The story attenuates probability: this is why its denouement, the truth learnt at the end is so surprising. Both Frank’s and the reader’s natural cognitive and emotional tendencies entice to unreflectively accept information.

Religiousness helps Frank in everyday life, because it offers him answers, consolation, the sense of an order and integrity. It is practical. Paradoxically, Banks shows that this could not be stated considering scientific thought, since most theories are inherently speculative and useless in everyday life. The knowledge about the shape of the Earth goes beyond folk intuitions and perception – in the long run it does not matter, whether Earth is a sphere or a Möbius strip. As for personal, everyday experience, the Earth is rather flat. Scientific truth is very often “overwhelmingly incompatible with our commonsense conceptions of space and time and matter” (McCauley 109). Commonsense intuition makes Frank believe that he is a not-so-complete boy, because he is physically and mentally strong, has to shave his beard and loves fights and alcohol, just as any stereotypical man should. Besides, his father told him a believable story of childhood. Only making a claim that goes beyond what Frank knows allows him to learn the truth about his sexual nature. This claim is very difficult to make: even when Frank discovers the male hormones in his father’s study, he still believes in his male integrity, supposing that his father is a woman in disguise.

In the end, does Frank's discovery change anything? In the last chapter Frank provides justifications for his self-image and behavior, stating: "I am still me; I am the same person, with the same memories and the same deeds done, the same (small) achievements, the same (appalling) crimes to my name" (*The Wasp Factory* 182). Scientists argue that human cognitive capacities exist not to hand the truth about the world, but to let us survive and adapt to the environment. Frank's thinking is therefore appropriate, due to the fact that "[s]cience becomes cognitively unnatural, however, because it reliably traffics, usually sooner rather than later, in representations that are radically counterintuitive" (McCauley 107). Put simply: Banks associates science with counterintuitive and reflective thinking⁵³, while religion is for him intuitive, natural, and – as a result – immensely powerful⁵⁴.

⁵³ I consider Banks' story "Piece" as deserving a short mention in this context: "Piece" offers one of the very instances, in which Banks outwardly expresses a grim warning against the possible upcoming social turn away from science towards religion, just because religion is so naturally potent: "[m]aybe reason is the aberration (thought perishes)", he states (*The State of The Art*, n.p.). In this story, the main protagonist, Mr Munro, is shocked by the religious fundamentalism of his fellow student who desires to become a university lecturer, and whose father is a well-known astro-physicist. Mr Munro states that even though it's almost the last decade of the 20th century, "it's midnight in the dark ages just the thickness of a book away, the thickness of a skull away; just the turn of a page away" (*The State of The Art*, n.p.). "Piece", in its form resembling a manifesto, stands out among the other stories included in *The State of the Art* collection. As Joe Norman observes, "Banks frequently found a direct outlet of his views on matters pertaining to religion, sometimes writing from the perspective of characters whose views seem to directly align with his own, such as atheist's Mr Munro in "Piece"" (37).

⁵⁴ On the one hand, then, religious thought can be driven by mechanisms utterly different from scientific ruminations. On the other hand, though, science tends also to be often based on what we wish to believe in: "[s]cientists are human, and humans are driven by what psychologists call "confirmation biases" (we love evidence that supports our view) and "disconfirmation biases" (we disparage evidence that undermines our view)" (de Waal 95-96). An example of this phenomenon can be found in Banks' novels: Frank's father hates women, so he does not want Frank to become one. He stuffs his daughter with both male hormones and potassium bromide, reveling in the belief that more hair on her face is enough to make her male. Banks employs such a plot because, in my opinion, he is intent on showing that science is prone to being influenced by subjective thinking, including personal frustrations and desires. Therefore, science can be very similar to religion, if only one considers its cognitive basis. Banks develops the idea in *The Hydrogen Sonata*, where he describes the humanoid civilisation called the Gzilt, whose holy scripture, The Book of Truth, contains claims that are verified by every scientific breakthrough the Gzilt make over time. The more the Gzilt discover and understand about the world, the more the book gains in credence: "one of the things that has always made the Gzilt feel so special, so marked out, has been the fact that their holy book ... turned out to be verifiable" (77). In *The Culture Series of Iain M. Banks: A Critical Introduction* (2015), Simone Caroti observes that the Gzilt's holy tome is just a hoax perpetrated by some academics of the Zihdren, a long gone civilisation. It was an experiment: "by announcing in the Book of Truth the relevant sequence of scientific and technological discoveries, the Zihdren essentially put the Gzilt on a purely applied research path carefully designed to direct their scientist's attention in the correct direction every time" (205-206). The Gzilt desired the Holy Book to be true, so they were easily directed by the Zihdren to

2.4 IAIN (M.) BANKS: GODS IN THE CULTURE

Iain M. Banks' first science fiction novel, *Consider Phlebas*, may be also perceived as an examination of what is cognitively natural for human beings. Even though it is set nine thousand years into the future, Banks' humans have not changed much: according to contemporary scientists, people operate today with "most of the same cognitive equipment that prehistoric hunter-gatherers possessed" (McCauley 54), and Banks develops on this point. Life is, nevertheless, so comfortable that the Culture citizens seem to be intellectually passive. They are still mortal, but thanks to "genofixing" they can live virtually forever, preoccupied with their little pleasures "such as sport, games, romance, studying dead languages, barbarian societies and impossible problems, and climbing high mountains without the aid of a safety harness" (*Consider Phlebas* 87). The Culture is a hedonistic paradise based on the negation of pain and death. It would seem that Banks presents the utopian Culture as absolutely secular, because it does not need any traditional deities. It is argued, however, that all large-scale societies do need imagined or real supervision: big groups need big, powerful gods, who watch over everything they do (Norenzayan and Hansen 174-87, Norenzayan and Shariff 58-62). It could be assumed that in *Consider Phlebas* the Minds, or sentient machines in general, take over the role of gods, since in the Culture nothing said goes unrecorded; nothing experienced unnoticed (*Consider Phlebas* 87). The Minds "up there" are watching and evaluating each individual's actions, for they became so intelligent that no human is capable of understanding how smart they are (86). In fact, Baker and Martingale have challenged the apparently secular nature of the Culture, comparing the Minds with gods in their analyses. They both attribute Minds with godlike qualities, such as omniscience, omnipotence, and unfathomability. Baker observes that the AIs of the Culture have "almost God-like power" (106). Similarly, Martingale asserts that "Banks may have rejected supernatural deities in favour of technological ones in terms of Man's salvation, but he has certainly

follow a specific scientific path. If not for the Zihdren, the Gzilt could have been making completely different discoveries and their scientific development could have followed another route. With the Gzilt, Banks illustrates how science is easily influenced by what we believe in and what we would like to be true. The Gzilt were intently looking for confirmation of every idea included in The Book of Truth. Cognitively speaking, scientific and religious thinking and the prejudice they involve are believed to be akin. The Zihdren appear to share this view, so their experiment proved to be very easy to orchestrate.

substituted one set of gods with control over humans for another” (471). What is most important in the context of this discussion, though, is the fact that both critics state that the Minds can be considered godlike even if they are not supernatural at all. Baker explains that “the efficacy, or divinity in any common sense, of these Gods is irrelevant; what matters is that every society finds its own godlike being” (106).

The main protagonist of *Consider Phlebas*, Bora Horza Gobuchul, understands that the Culture made their gods material, truly omniscient and almighty (86-87). In fact, this idea bears close resemblance to the already discussed Wasp Factory, which may be understood both as a technological and a religious item. Though while for Frank it is a perfectly natural state of matters, for Horza the existence of material things equipped with godly powers is both dangerous and far from being natural. Horza believes that deities should stay as they were for thousands of years, meaning to be the imaginary products of the brain tissue. This is the reason for him supporting the Idirans who value life: “boring, old-fashioned, biological life; smelly, fallible and short-sighted, God knows, but real life” (*Consider Phlebas* 29). The Idirans perceive themselves as agents of God who desires order in the universe, therefore they are waging an imperialistic conquest against other civilizations (157-158). For Horza it is the ultimate naturalness of such wishful thinking that makes the Idirans normal, in contrast to the Culture being an evolutionary dead end (158-159). Slingerland writes:

In cognitively fluid humans, reward expectancy over long-term tasks may be maintained at least in part by the feeling that some metaphorical conspecific “up there” is watching and approving or disapproving of our actions, or (in its modern iteration) a more diffuse, nontheistic sense that what we are doing “matters” – a conceit that makes no sense unless we project some sort of abstract, metaphorical agency onto the universe. (286)

Horza notices that Idirans believe in a purpose to life. What he falls short of noticing, however, is the idea that the penchant for technology may be as natural as the love of gods. Thus, he seems to be oblivious of the fact that the Culture’s belief in agency and purpose directly mirrors the zeal of Idirans. The Culture allegedly has what Slingerland calls a “nontheistic sense” that what they are doing is meaningful; it has:

[t]he urge not to feel useless. The Culture's sole justification for the relatively unworried, hedonistic life its population enjoyed was its good works; the secular evangelism of the Contact Section, not simply finding, cataloguing, investigating and analyzing other, less advanced civilisations but - where the circumstances appeared to Contact to justify so doing - actually interfering (overtly or covertly) in the historical processes of those other cultures. (*Consider Phlebas* 451)

It appears that the Culture fights against the Idirans because, regardless of its materialist and practical outlook, it fears "the destruction of its spirit; the surrender of its soul" (452-455). The Minds are cognitively human-like: they have "drives", "ideas" and a wish to "clean up the galaxy, make it run on nice, efficient lines, without waste, injustice or suffering" (35).

As I have already mentioned in the discussion of *The Wasp Factory*, scientists and philosophers imply that humans are born dualists with an ingrained tendency to perceive reality as divided into objects and agents. While it is easy to admit that each body is a material evolutionary product, people tend to believe that there is something more than that to their existence. From the cognitive perspective this is why humans believe in the immaterial mind or soul which gives purpose to human life. The Culture's Minds, evolving from technology made by humans and human-made machines, seem to possess a very similar mindset to humans. They are, however, godlike from the human perspective: all-powerful, fear-inciting, and omniscient. In the Culture's realm, such a situation proves evolutionarily successful: the Culture is spreading, while the Minds "are the very image and essence of the life itself" (333-334). In *Excession*, Banks states that the Minds, or more generally the Culture, "decided to attempt to accomplish what the gods, it seemed, could not be bothered with; discovering, judging and encouraging – or discouraging – the behavior of those to whom its own powers were scarcely less than those of a deity" (82). The Minds enjoy possessing agency: they are unstoppable do-gooders with an unquenchable thirst for influencing the lives of members of its own society, but – most importantly – they are focused upon changing the fates of less advanced societies. From the Culture's citizens' perspective, the Minds, to certain extent, are like gods who are real, present, and fulfilling the wishes of the inferior organic beings. From the readers' perspective, however, the Culture's AIs share a human mindset, with

all its most important tendencies and drives - such as the belief in one's own importance, the desire to have some lasting impact on the reality, and to change the world⁵⁵.

The Culture's Minds possess a human-like mindset, because they take pride in steering the development of civilisations, and they exhibit a fear of lack of agency, as well as the terror of nothingness. This is the main reason the Culture is not prone to undergo the process of Subliming. Subliming is the concept first introduced by Banks in *Excession*, which reappears subsequently in many of his novels, and gets most developed in *The Hydrogen Sonata*. Subliming is a process that allows civilisations to transfer the consciousness of its members to another plane of existence, called the Sublime. In *The Hydrogen Sonata*, Banks defines the Sublime as "the almost tangible, entirely believable, mathematically verifiable nirvana" (72). In line with Banks' cosmology, there is a clear divide between the Real and the Sublime. Subliming equals an end point of a civilisation, as it gets finally removed from the material universe, together with all its influences and interests. Some contact between the Sublime and the Real can be maintained, but it is not prominent. The Sublimed have never engaged in the matters of the Real. They:

[t]ook almost nothing to do with the rest of life in the galaxy whose physical trappings they invariably left behind; tyrants went unchecked, hegemonies went unchallenged, genocides went unstopped and whole nascent civilisations were snuffed out just because their planet suffered a comet-strike or happened to be too near a super-nova, even though these events occurred under the metaphorical noses of the sublimed ones. (*Excession* 82)

⁵⁵ Joe Norman disagrees with Baker's and Martingale's arguments about the divinity of the Minds, as for him their power is too limited to have them treated as gods: "they cannot, for example, simply materialize anywhere ... cannot exist everywhere at all times, and cannot access *all* information in the universe", and, what is crucial, "they are also forbidden to penetrate the thoughts of their citizens and access personal information" (45). For him, the Minds themselves do not bring a "religious sensibility" to the Culture, because they are material beings, who are not the subject of faith nor worship (45-46). I agree with Norman, as even though the Minds appear divine and equipped with godlike powers, they are still just very powerful entities, who have a human-like mindset, including our own drive for importance and immortality. Linter, one of the characters of "The State of the Art" short story, notes that "God, who sees and knows all, who is all-powerful, all-knowing, in a way that no ship, no mere Mind can ever be; *infinitely knowing*" (n.p.). Linter is a peculiar character, because he rejected the Culture in order to live on Earth. For him, life in the Culture cannot offer the happiness one derives from the belief in a supernatural God (Norman 46). In *Excession*, one of the Minds even admits that "if we have ever worshipped anything, it has been the great god Chaos. (What else shields Intelligence from the awful implications of utter Omniscience?)" (118). Minds do not want to be omniscient in the way gods are. They find limited powers and knowledge more appealing.

The Culture approaches Subliming with suspicion, as well as with a slightly decadent attitude, mostly because undergoing the process would end the relations with the material universe, and incapacitate influencing the development of less advanced civilizations. In other words, Subliming would deprive the Culture of power. A similar situation would happen if the Culture retreated into Elderhood or – in other words – joined the ranks of superiorly developed civilisations, who stay totally dissociated from the normal life of the galaxy, but still are physically rooted in the Real (*The Hydrogen Sonata* 73). It could be speculated that the Minds exhibit a very humane fear of death, which ultimately equals the terror of losing one's power and agency.

2.5 IAIN (M.) BANKS: FEAR OF DEATH. IMMORTALITY

The drive towards immortality is argued to be closely interrelated with the innate religiosity of the human being. There is a multitude of things that grant us some hope of eternal life – we can attain literal immortality in heaven, reincarnation, or with the help of medical and technological progress which would make it possible for us to live indefinitely. We can also hope for symbolic immortality, which stems from the faith in our personal capacities and in the superior values of our culture: the conviction that even though we might not be here forever, but we will accomplish something great and important, whether as individuals, or as a part of a certain community (Solomon et al., ch. 1, n.p.). According to one of the characters of Banks' *Matter*, “people craved self-importance; they longed to be told they mattered as individuals, not just as part of a mass of people or some historical process. They needed the reassurance that while life might be hard, bitter and thankless, some reward would be theirs after death” (206).

Banks' universe is brimming with ways to attain literal immortality. Subliming is one of them. It is even worshipped as a religion:

Sublimers had turned what was a normal but generally optional part of a species' choice of fate into religion. Sublimers believed that everybody ought to Sublime, that every human, every animal, every machine and Mind ought to head straight for ultimate transcendence. (*Excession* 259)

The citizens of the Culture:

[c]ould opt for rejuvenation and/or complete immortality, they could become part of a group mind ... they could transfer out of the Culture altogether, bravely accepting one of the open but essentially inscrutable invitations left by the Elder civilisations, or they could go into Storage⁵⁶, with whatever revival criterion they desired. (*Excession* 81)

⁵⁶ It is “where some people went when they had reached a certain age, or if they had just grown tired of living. It was one of the choices that Culture humans faced towards the end of their artificially extended three-and-a-half to four centuries of life” (*Excession* 81).

Recording mind-states or, in other words, making back-ups of yourself, is another typical lifestyle choice of the Culture's members. Other civilisations, like the Chelgrians, have even developed technologies, which grant entrance to the virtual heavens shaped for the needs of the dead citizens:

What the Chelgrian-Puen, the gone-before, did with their still applicable super powers was to build heaven. They made matter of fact what had until then required an act of faith to believe in. When a Chelgrian died, their Soulkeeper device was the bridge that carried them across to the afterlife. (*Look to Windward*, 166)

In *Surface Detail*, Banks concentrates on technologically created, virtual reality afterlives. He emphasises that they vary substantially, from one civilisation to another:

Some Afterlives simply offered everlasting fun for the post-dead ... Others were as much for the benefit of those still living as the dead themselves, providing societies that had inherited or recently come up with the idea of consulting the ancestors with a practical way of doing just that. ... Some – and the majority of the more long-established Afterlives – featured a sort of gradual fading-away rather than genuine post-death VR immortality ... Some even incorporated ways to bring favoured dead individuals back to life again. (127-128)

In addition to the Heavens, some civilisations have constructed the Hells, where the uploaded minds of individuals are undergoing constant torture and agony, which suffering is amplified in comparison to the pain that can be felt in the real world. One of the torture apparatuses consists, for instance, of an endlessly grinding wheel constructed of live nerve endings (*Surface Detail* 47). In *Surface Detail*, Banks describes in painstaking detail a whole system of interlinked virtual reality Hells, which are, in fact, rarely mentioned in the intergalactic realm, as they are considered a taboo subject. When the existence of the Hells becomes eventually widely known, it causes a major uproar, because most civilisations consider the Hells as perverse, evil and uncivilised creations (132). The Culture engages in an anti-Hell war, which constitutes a huge part of *Surface Detail*'s plot. As Joe Norman states, "Banks clearly aimed to render as vile and ridiculous any belief that such a torturous and sadistic system – whether supernatural or otherwise –

could be justified by its ability to provide an impetus away from sin, and towards moral good” (42-43). Nevertheless, the mere proliferation of the various ideas of afterlife in different civilisations and cultures, proves that there is some universality in the pan-human desire for immortality. Simply put, Banks emphasises the fact that people in general crave eternal life: be it achievable via spiritual paths, or through technological ones, such as digital back-ups, uploading consciousness to a virtual reality or age reversal⁵⁷.

The immortality favoured by the Culture is matter-based, encoded in raw substance and digital codes. Considering the phenomenon of Subliming, one can argue that there is more than matter in the universe the Culture exists in, but the Culture is nevertheless inextricably attached to the mundane, as well as enamored with the material plane of existence - consciously rejecting the Subliming possibility. Some of the protagonists of Banks’ novels, such as Horza from *Consider Phlebas*, are appalled by the realisation that life and immortality can be limited to the material, tangible universe. Horza himself is “the product of careful thought and genetic tinkering and military planning and deliberate design”. He was bioengineered to become a Changer: an individual capable of mimicry (336). However, he appears not to accept the notion that thinking is an embodied process, while thoughts are just physical states of matter within brains. The idea of no “superphysical soul or self, outside of the chain of physical causation, controlling or overseeing the process” (Slingerland 257) horrifies him. Paul Churchland states that since we can train ourselves to adequately perceive the shape of the Earth, we can also force ourselves to correctly comprehend what we are, which inevitably involves disposing of dualist illusions and folk psychological concepts in order to accept ourselves being mere matter (30-34). Yet Banks shows that it might be very troubling to hold a view that all living, sentient creatures are just physical, material

⁵⁷ Storage could be treated as a futuristic variation on the idea of cryonics performed by organisations such as Alcor, which specialise in the preservation of human corpses in liquid nitrogen after legal death, with hopes of restoring them to full health when hypothetical new technology is developed in the future. The dream of immortality permeates contemporary science: suffice it to mention Raymond Kurzweil, an American author, inventor and futurist, who predicts that by 2030, human brains will be fortified by computer intelligence and nanobots regulating all the bodily processes, and extending human lives indefinitely. On the other hand, Aubrey de Grey, an English biomedical gerontologist, argues that it will soon be possible to upload the human brain to a computer as a backup in case of death or memory loss (Solomon et al., ch. 6, n.p.). Banks is thus not alone in his fantasies concerning the technological faces of immortality.

systems produced by a mindless process lacking any purpose. In *New Humanist*, he states:

I've always felt that one ought to retain just the tiniest, sliveriest wee bit of agnosticism to season what is basically outright atheism, on the grounds that – in the end, after all – each of us is just a solitary smart ape on a piffling little planet in an ungraspable big universe and the sheer bleeding obviousness of there being no supreme deity could itself be a huge cosmic joke on the part of a particularly annoying and mischievous god. (qtd. in Joe Norman 39-40)

It is unsettling to realise our lonely position in the universe, our utter physicality. Otto Rank, Freud's student, proposed that "the soul is one of humankind's earliest and most clever inventions, enabling humans to dodge death by perceiving themselves as more than just physical beings" (Solomon et al, ch. 6, n.p.). In *Surface Detail*, Banks similarly observed that "the idea of a soul ... was a relatively common piece of doctrinal baggage accompanying people just making their debut on the great galactic stage" (122-123). It is difficult and emotionally unsatisfying to rationalise both the idea of a soul and the sense of personal uniqueness as illusions produced by the brain - that may be the reason why people comfort themselves with illusions, and resort to religious or quasi-religious thinking.

The existence of the soul, its character and importance, constitute a crucial theme in Banks' works. One of the main characters of Banks' *Look to Windward*, major Quilan, observes with nostalgia that once:

[w]e believed that the soul might be saved. Now our technology, our better understanding of the universe and our vanguard in the beyond, has robbed us of our unreal hopes and replaced them with its own rules and regulations, its own algebra of salvation and continuance. (47)

Thus, for both Horza and Quilan, the Culture's citizens have lost a substantial part of their humanity: their sense of importance, uniqueness, and the blind faith in the existence of the unknown. As Yannick Rumpala argues, most Culture's members "have not noticed that the price to pay for their hedonistic way of life is an underlying relinquishment of individual free will" (26). People have also lost the fear of death, the uncertainty of

afterlife, which at the same time made them human, and pushed them to great lengths to change the world. In the Culture, as in other advanced civilisations, the existence of a soul became not a matter of faith, but a matter of fact:

Even if your civilization had somehow grown without the concept [of a soul] it was kind of forced upon you once you had the means of recording the precise, dynamic state of someone's mind and either placing it directly into the brain of another body, or storing it as some sort of scale-reduced – but still full – abstract inside an artificial substrate. (*Surface Detail* 122-123)

Some Culture citizens make feeble attempts at retrieving the lost importance of existence, but these, in general, are mostly misguided, and rarely encountered⁵⁸. There is almost no resistance against the Culture's ways, no rage, nor resentment. "The Culture offers every possible distraction to the troubled mind, and of course everyone's glands secrete the proper mood at will", Alan Jacobs states (47). In contrast to the organic citizens, the Minds, who fully accept and understand the underlying materiality of reality, are equipped with a strong sense of purpose and agency, as well as a feeling that they have a role to play in history of the universe. In other words, the Culture's AIs are consciously striving for symbolic immortality, which in this case means having a lasting impact on the world. This propensity can also be connected with the cognitive processes associated with religiousness, and the consequent belief in their own importance. As Solomon et al. put it:

When we stand up in the morning, we have to believe that life is meaningful, and that we, as individuals, are valuable contributors to that meaningful universe. ... [W]e want to feel heroic. That's the way we manage the existential terror the awareness of death would otherwise provoke. ... Self-esteem enables each of us to

⁵⁸ As for the non-conformist individuals or groups, some people, for example, treat mortality as a lifestyle choice, calling themselves the Disposables, because they gladly participate in dangerous activities without recording their mind-states to revive them if they died (*Look to Windward* 61). The Disposables try to restore the fear of death, which would make them feel more alive, and paradoxically more open to embracing danger and aiming for impossible goals. The motives behind such behaviour are, however, rather shallow. Banks explains that the Disposables are driven by adrenaline cravings, the desire to be fashionable and unique, but they are devoid of any self-conscious understanding why. This sense of uniqueness, together with the acceptance of the material side of existence, just makes extreme sports much more pleasurable. It is instinctive, and there are no deep thoughts behind it. The Culture's citizens, in general, do not delve into the motives behind their risky, seemingly illogical, behaviour.

believe we are enduring, significant beings rather than material creatures designed to be obliterated. (Solomon et al., ch. 1, n.p.)

The Minds are devoted to spreading their values across the universe. The Culture could have sublimed “anything up to ten thousand years ago”, but they had chosen not to, because “Subliming seemed to be the opposite of useful as the word was normally understood. Rather than let you play the great galactic game of influence, expansion and achievement better than you could before, it appeared to take you out of it altogether” (*Look to Windward* 165). This is another instance of how the Culture’s AIs resemble contemporary humans in their outlook: “we humans feel fully secure only if we consider ourselves valuable contributors to that world we believe in” (Solomon et al., ch. 3). The aim of the Culture is to influence the lives of other civilisations, so that they dispose of their violent ways, get rid of inequalities permeating their societies, and become a part of the Culture, ultimately sharing its set of values. Alan Jacobs observes that the purpose of Special Circumstances is “to implement the Culture Minds’ decisions about how to handle other sentient beings, and those decisions are shaped overwhelmingly by a single criterion, that is, how close is a given civilization to the values and priorities of the Culture itself” (48). A civilisation may be wiped from the universe when its values are violently opposed to the Culture, and that’s exactly what happens to the Idirans in *Consider Phlebas*:

In order to prevent this fanatically religious society from imposing its repressive ideals on other parts of the cosmos, the Culture virtually destroys the whole Idiran culture and a great deal else, including fifty-three planets and half a dozen stars. (50)

This is what Jacobs terms the “worst-case scenario”, though. Most of the civilisations reached by Contact are subject to mentoring (50), since the Culture “evidences no generalized desire for war or conflict, and attempts to do everything in its power to avoid such confrontation ... Conflict in the Culture is an issue of reaction rather than pro-action: the movement of war is only taken when all other avenues are removed” (Kerslake 210). The Idirans, for instance, consider themselves vastly superior to all other intelligent creatures, so they enslave and exploit others whenever possible. According to Ivalyo R.

Shmylev, the Culture engages in the war against the Idirans predominantly because the latter possess technologies and logistics which might enable destroying the Culture, as well as obliterating any other societies which value democracy, liberty, and equality (65). I assume that the reason for that behaviour on behalf of the Culture lies deeper: it is related to the fact that everything we believe in and strive for can be challenged by alternative ways of life and different worldviews, so the threat must be parried by showing “these ignorant, misguided, or sinful people the light, thereby assimilating them into our worldview. What better proof of the validity of our view of the world than for others to come around to our way of thinking?” (Solomon et. al, ch. 7, n.p.). This process of assimilation into a particular worldview, or - using Jacobs’s terminology - mentoring, is the main theme of *Matter* (2008), where the civilisation Contacted is a medieval warrior society: “When the Culture decides to mentor you you will be mentored quite thoroughly, even (or especially) if you’re the kind of society that fans of epic fantasy nostalgically tend to long for” (Jacobs 51).

In *The Hydrogen Sonata*, the Zihdren-Remnanters (the members of the civilisation which had decided not to Sublime) set a meeting with a Gzilt warship, in order to share with them the revelation that the Gzilt Book of Truth is a hoax. By doing that, the Zihdren are undermining the whole worldview of the Gzilt, who are at that point almost done with their preparations for the Subliming. Revealing the truth to the Gzilt people would shatter their belief in being the chosen intergalactic civilisation. Therefore, upon receiving the message from the Zihdren-Remnant Ceremonial Guest, the Gzilt ship annihilates the Zihdren vessel in an especially powerful outburst of energy. Later, “the higher echelons of the Gzilt government, afraid that the revelation will shock the bulk of the civilisation into refusing to Sublime, has decided to suppress the truth by every means available – including killing its own people, if there’s any danger they may have somehow intercepted the Zihdren-Remnant’s signal” (Caroti 206). Solomon et al. describe in detail the mechanism behind such behaviour: they argue that human beings exhibit disdain toward people who do not share their faith or beliefs. They take solace in their demise, in destroying another set of values, in order to support their own outlook on the universal scheme of things (ch. 11, n.p.). In *The Hydrogen Sonata*, the Gzilt Sublime in the false conviction that even on the other side, they will still lead a meaningful existence,

becoming the elite of the Sublimed civilisations. The Culture does not stop them, and one could wonder why. The answer may be that the Minds intuitively grasp the motives and goals of the Gzilt: they, too, understand the meaning of sharing and following a consistent set of beliefs, the urge to feel special, the need to exhibit a positive influence on reality, even though the universe which surrounds them is flawed, limited and ultimately ungraspable.

2.6 CONCLUSIONS

In the words of Shmiev, “*The Hydrogen Sonata* is ... not a tragedy, but a tribute to the unbroken engagement with the limitations of reality and to the triumphs of those who, under the direst of circumstances, persevere in this engagement” (67-68). The Culture and the Gzilt share the fear of death and the drive towards immortality, be it literal or symbolic one. Their values, beliefs, and choices are different, sure, and at some points even conflicting, as the Gzilt are highly religious and the Culture is secular, but the underlying cognitive functions and drives stay the same. Even if the Culture is not straightforwardly religious, its philosophy stems from the innate drive towards immortality, which can be attributed to the same processes that are responsible for religiousness.

In his novels, Banks portrays the proliferation of some forms of religious thinking: be it in isolated, laboratory-like contexts, as in *The Wasp Factory*, or in the distant future of intergalactic civilisations and sentient machines. Religiousness is unquenchable: even if it does not lead to the creation of myths, rituals, or faith (as is the case of the secular Culture), reason and rationality is not enough to dispose of the consequences of innate religiousness of self-aware beings. Thus, AIs find consolation to their fear of death, chaos, and meaninglessness in their mission to become the saviours of the universe, while virtual afterlives pop up and hold their footing, even though – adopting a rationalist perspective – they are useless, primitive, or cruel remnants of the past.

The ubiquity of religiousness is striking in the scope of Banks’ literary works, and points to the fact that there may be common, natural processes behind it, such as the ones associated with the Theory of the Mind, or with the hypersensitive agent detection device. Three interconnected phenomena: the fear of death, the drive towards immortality, and religiousness may grow out of basic cognitive functions, such as autobiographical memory or imagination.

Through his focus on the natural cognitive propensities and processes, Banks delves deeper and deeper into his investigation of humanness – even in the de-humanised context of a technology-driven civilisation of the Culture. In fact, a question should be asked considering the cognitive make-up of the Culture AIs: to what extent are they

actually similar to the human beings? What conclusions can be drawn from the analysis of this (dis)similarity? I shall get back to this discussion in the fourth chapter. But before I do so, there is one more step to be made, logically following from the examination of phenomena such as memory, imagination, religiousness and the fear of death.

CHAPTER THREE: CONSCIOUSNESS AND THE SELF

3.1 INTRODUCTION

While I consider religious thinking, memory and imagination as the phenomena that Banks gladly elaborates on, consciousness is a topic especially interesting in the context of Banks' fiction. In other words, in order to fully understand and, consequently, elucidate Banks' ideas, the discussion of consciousness should by no means be omitted, as it logically grows out of the analysis provided in two preceding chapters. Now that I have provided a synopsis of Banks' presentation of chosen cognitive faculties, in this chapter I am ready to delve deeply into the issue of what consciousness means in Banks' novels. This discussion equals another step in the direction of elucidating my understanding of the main idea behind Banks' work – which, in my opinion, is explaining what humanness means.

First, I provide a short summary of theories relevant in the context of consciousness and the self, which is based mostly upon a book by Susan Blackmore - *Consciousness: A Very Short Introduction* (2005). Next, I provide a framework on emotion-related notions and theories, in which I often use Jan Plamper's *The History of Emotions: An Introduction* (2015). Finally, I provide an outline of the approach that I am using in my discussion of Banks' novels. This approach is based upon a theory propagated by Jaak Panksepp in Lucy Biven in *The Archaeology of Mind: Neuroevolutionary Origins of Human Emotions* (2012).

Employing Panksepp and Biven writings, I proceed to focus on *The Player of Games* (1988), Banks' second Culture novel, in order to argue that the Scottish writer perceives visceral sensations and emotions as the inherent element of consciousness, as well as the substrates essential for the birth of the concept of the self.

I proceed to Banks' *Transition* (2009), in which Banks eagerly elaborates on the role active perception plays in the creation of reality. In this part, I refer to Antonio Damasio's *Self Comes to Mind: Constructing the Conscious Brain* (2010), as well as to the concept of solipsism. I argue that for Banks, it is not possible to transcend the

subjective point of view, which is always rooted in personal sensations and emotions. Sensing, feeling and acting are, therefore, foundations of the self.

If sensing, feeling and acting are the prerequisites for the emergence of consciousness, then it is essential to investigate the function of the body in Banks' oeuvre. Via analysing his Culture novels, I am investigating Banks' ideas related with the topic of embodiment, as well as the writer's portrayal of the relationship between the functioning of the body and the emergence of consciousness. I concentrate on genetic engineering phenomena present specifically in the Culture - such as glanding, genofixing or cloning, in order to discuss the ways in which the consciousness of the Culture's citizens is embedded in matter.

In my discussion I also analyse Banks' early mainstream novel, *The Bridge* (1986), in order to explain why for Banks dreams are not the products of a Freudian unconscious, but a state of consciousness. In this part of the chapter, I employ the theories proposed by J. Allan Hobson. According to Hobson dreams are the building blocks for consciousness and a sense of self.

Put shortly, in this chapter I examine emotions, active perception and dreams to illustrate Banks' views on the characteristics of consciousness and the idea of the self. Whenever my arguments require expanding or clarification, I briefly refer to Banks' other Culture novels, such as *Excession*, *Look to Windward*, *Matter* and *The Hydrogen Sonata*⁵⁹.

⁵⁹ *Excession*, *The Player of Games* and *The Bridge* are perceived by David Pattie as novels about finding oneself enmeshed in the structures of power (25). Cairns Craig was closer to the path of analysis I would like to choose, as he focused on the importance of play in *The Player of Games*, coming to the conclusion that the dominant themes of Banks' fiction are the conflict between being played upon and being a player, as well as the difficulty of grasping the rules of the game one is playing (*Sublime terror* 233). I wish, however to approach Banks' novel from a different angle, and focus on the function of play-induced emotions in the creation of consciousness.

3.2 FRAMEWORK: CONSCIOUSNESS AND THE SELF

Consciousness was mainly the domain of philosophers until the second half of the 20th century, when scientists began to study it for the first time. In the 21st century, the studies of consciousness were brought into the biological context (Nalbantian, Introduction 3), and scientists began to strive to answer the question of whether consciousness exists - and if it does, what does it do. The phenomenon in question, often referred to as “sentience” of “awareness”, has no generally agreed definition. As Steven Shaviro puts it:

And what is the difference – if any – between thinking, feeling, being aware, and knowing? ... Still today, there is no consensus whatsoever upon any of these topics: neither among scientists and philosophers, nor among the general public. (Introduction, n.p.)

Consciousness is thus an open-end notion - extremely difficult to explain, let alone define. There are, however, different commonly held assumptions. One of them is the widespread metaphor of “the theatre of the mind”, according to which:

The mind is like a private theatre inside my head, where I sit looking out through my eyes. But this is a multi-sensational theatre with touches, smells, sounds, and emotions. And I can use my imagination to conjure up sights and sounds as though seen on a mental screen or heard by my inner ear. All these thoughts and impressions are the ‘contents of my consciousness’ and ‘I’ am the audience of one who experiences them. (Susan Blackmore 14)

Another commonly held assumption is that consciousness is a stream. In the 19th century, William James coined the phrase “the stream of consciousness”, which has greatly influenced philosophy and literature alike. According to this concept, consciousness is a flowing river of sounds, touches, smells, thoughts, memories and emotions. This popular idea of consciousness also entails the proposition that some experiences are “in”, while others stay “outside consciousness”. Put differently, some brain processes are conscious while other – unconscious.

In addition to these popular conceptions, there are also common ways employed to discuss consciousness. In 1974, American philosopher Thomas Nagel asked the famous

question: what is it like to be a bat? Nagel argued that an organism has conscious mental states, “if and only if there is something that it is like to be that organism – something it is like for the organism to be itself” (519). Nagel’s influential thought experiment about consciousness incited the understanding consciousness as the phenomenon of “What it’s like to be ...”. This is the first common way of referring to the issue in question. Another is subjectivity or phenomenality: consciousness tends to be understood as subjective experience, in contrast to how things are objectively speaking. The third idea inexplicably connects with consciousness studies is that of qualia - the ineffable and subjective qualities of experience⁶⁰.

In general, all the above-mentioned concepts are permeated by a conviction that consciousness is something subjective. Thus, arguing in favour of the existence of consciousness requires a discussion of how subjectivity arises from the objective, physical world. This leads us to the mind-body problem, which entails the fact that everyday human experience seems to consist of two disparate kinds of things: our personal experiences, which are ineffable or indescribable, yet seem vivid and real. These experiences make up the world each of us lives in. On the other hand, there is a physical world out of which these personal experiences stem.

Throughout history, dualist philosophy explained the mind-body problem, postulating the existence of both the “inner” and the “outer” realm, and promoting the idea that a non-physical essence exists. This thinking stems from the 17th century, when René Descartes created the most famous dualist theory, according to which the brain and the mind consist of different substances. Descartes suggested that the mind is non-physical, while the body is made of matter. These two distinct entities, Descartes argued, connect in the centre of the brain (Susan Blackmore 4-5).

This Cartesian idea of interaction could not, however, be proven nor explained: for this reason, most contemporary philosophers and scientists reject dualism in favour of monism and materialism. For instance, in his multiple drafts theory, Daniel Dennett criticises the “theatre of the mind” idea, which assumes the existence of a place and time in the brain where and when consciousness comes to life. Dennett emphasises that there is no point at which things enter consciousness, because the brain is a distributed processing

⁶⁰ For instance, the redness of a red mug is a quale, the smell of a tulip flower is a quale too, and the sensation of pain in the foot is another.

system with no headquarters (Susan Blackmore 15, 49). In general, materialists face a grave problem of how to explain anew the fact that in a physical, material brain mental and highly individual experiences are born. Usually, they consider consciousness as a potent and realistic illusion⁶¹, which is inseparable from being able to feel, perceive, and think. Monists and materialist argue that what we call consciousness is an intrinsic faculty of the processes happening in the material body. This approach dispenses of the need to explain where and how consciousness, understood as a separate phenomenon, is born. Cognitive science revolves now around terms such as “embodied cognition”, “enactivism” or the “extended mind”, and most scientists agree thinking processes are dependent on a brain which is embedded in the body and the environment, ceaselessly interacting with them⁶².

On the other hand, a materialist approach requires discussing why the illusion of super-physical, highly subjective and conscious experience exists at all. It is a puzzling issue, taking into consideration the fact that consciousness is not known to do anything special. Neuroscience proves that it is not responsible for decision making nor aesthetic appreciation. Simply put, we are deluded: we feel as if our consciousness was a special ability or power, but it is a misguided assumption.

Consciousness is also associated with having a sense of self, which is also argued to have no practical use. Nevertheless, humans have an overwhelming sense of existence. Whenever we think of experiences, we assume that there is someone experiencing them. Whenever we think of actions, we assume that there is an actor, and when we think about the decisions we made, we always picture someone who made them. We exhibit a conviction that there are things that matter, and they matter to someone: to “me” or my “self”. In the previous paragraphs devoted to the examination of conceptions of consciousness, I have already mentioned that William James understood it as a “stream”. James, however, posited also the existence of the self who is subject to that “stream of consciousness”. In his famous book *The Principles of Psychology* (1890), James devotes

⁶¹ The Merriam-Webster online dictionary defines “illusion” as “perception of something objectively existing in such a way as to cause misinterpretation of its actual nature”. Thus, illusion is not something inexistent, but a mistaken idea about an existing thing. The argument that consciousness is an illusion would mean then that individuals are misunderstanding it. See: <https://www.merriam-webster.com/dictionary/illusion>

⁶² See: Susan Blackmore (2017), Antonio Damasio (2010) or Rocco J. Gennaro (ed.), 2018, *The Routledge Handbook of Consciousness*. New York: Routledge.

a lot of space to reveling on the mysterious nature of the self – “the most puzzling puzzle with which psychology has to deal” (qtd. in Susan Blackmore 79). In fact, the idea of the self has been a riddle ever since: Vilayanur S. Ramachandran calls it “the greatest scientific and philosophical riddle of all” (qtd. in Susan Blackmore 80).

In the context of the endless historical theories and concepts of the self, David Hume’s stands out. Hume stated that whenever he analysed his experiences, looking for a self that experiences them, he was incapable of finding one. He came to a conclusion that the self is a bundle of sensations that only seem to belong to one person, but are in fact tied by processes such as memory. Therefore, Hume’s theory is considered as the first so-called bundle theory of the self. Derek Parfit notes that in contrast to ego theories, bundle theories are built around the notion that there are no continuing, single selves (qtd. in Susan Blackmore 67). A kind of an ego theory is, for instance, Cartesian dualism. Major religions provide more examples, being based on the notion that there are souls, spirits, or individual selves. For bundle theorists, “self” is just an idea, a fleeting expression arising with experiences, and granting an illusion of continuity. In other words, there are experiences but there is no one having them – no specific “me”.

Even if bundle theories of the self are convincing, it is tough to accept the notion that the self is a temporary fiction and is not the same “I” who existed in the near or distant past. This may be because of the potent mechanisms that humans are believed to possess: the Theory of Mind and an agent detection device, which make us perceive entities having intentions in the surrounding world. This may lead to a conclusion that imagining an inner self equipped with desires, intentions, and agency is another aspect of the above-mentioned phenomena. This also leads to an observation that the only creatures possessing an illusion of consciousness and self could be humans. Humans are unique, because they have language and the Theory of Mind, which allow for modeling an inner persona⁶³. Other creatures live creating experiences and perceptual worlds, but only we shape an illusion of time-based streams of consciousness experienced by a particular entity.

⁶³ Following this line of thought, if a machine had language and was able to ask questions such as “Am I conscious now” or “What am I”, creating theories about its inner self and its own mind, it would mean that this machine possesses the same illusion of consciousness that we have.

3.3 FRAMEWORK: EMOTIONS

“What Is an Emotion?” (1884) is the title of a famous essay by William James, and the answer to James’s question has never been easy. The difficulty of defining emotion is assumed to be its most universal and unchanging characteristic: in other words, “everyone knows what an emotion is, until asked to give a definition” (Fehr and Russell 464). Defining emotions is as problematic as defining religion. Nevertheless, as is the case of religion, the discussion of emotions should not be omitted in the context of Banks’ works, which are permeated by a focus on feelings and their importance in the creation of consciousness.

Returning to James’s question: the fact that a psychologist attempted at answering what emotions are may not be surprising nowadays, but in historical terms it is of huge importance. In the 19th century, psychologists began to define emotions. Earlier, however, the discipline of psychology had not existed, which meant that in the West - until about 1860 - philosophy, theology and literature were responsible for theorising feelings. Plamper argues that after 1860, experimental psychology witnessed significant development, and began to dominate emotion-related discussions – at least until the late 20th century, when this dominance eventually shifted to the field of neuroscience (9-10).

Still, emotions have always been difficult to define, and thus are commonly treated as a meta-concept (Plamper 12). In neuroscientific literature two terms are of special prominence: that is, emotion and affect. These two are especially confusing – sometimes distinct, sometimes used interchangeably. The notion of affect, influenced by the neurosciences, “has in recent years increasingly assumed the sense of purely physical, prelinguistic, unconscious emotion” (Plamper 12). Unconscious physical affects are thus separated often from conscious emotions (which themselves are unconceivable without affects). In other words, emotions tend to incorporate the sense of subject’s awareness of what they are experiencing, instead of undergoing a purely nonverbal affective valuation of the world events. Therefore, emotions can be understood a form of cognition imbued with an affective component, while affect as the physiological component of emotion. In general, affect theorists tend to focus on precognitive, physical responses, while those who research emotions concentrate more on cognised feelings. According to Corrigan,

affect theory (which emerged from psychological research and animal studies) has influenced mainly literary studies, while emotions theories “are more important in fields such as philosophy, classics, history, religion, anthropology, and sociology” (10).

Single conclusion arises out of this terminological meddle: there are still no clear-cut, established terminological divisions between affects and emotions or affect- and emotion-centred theories. “Affects” are also referred to as “emotional feelings” or “primal emotional affects”, which may be painstakingly confusing⁶⁴. Therefore, as scholars and scientists are developing their distinctive vocabularies or individual approaches, I am going to choose a particular neuroscientific branch of thought, and follow it in my discussion of Banks.

Having provided an outline of the terminology associated with feelings, I think it is essential to take a quick glance back into the history of influential ideas about human emotions. In the ancient times, Aristotle deemed emotions and cognition as inseparable facets of one phenomenon. This approach towards emotions changed drastically when Augustine anticipated for the first time the duality of emotion and reason. Augustine’s writings commenced a powerful, persevering dualist line of thought, which Rene Descartes is most famously associated with (Plamper 17). Descartes, often referred to as the founder of mind-body dualism, emphasised the contrast between, or division of, reason and emotion (Plamper 17). Since then, reason and rationality has been elevated over emotions – or, in other words, the mind has been elevated over the body⁶⁵. As a result, it became a common conception that decision making - as a serious and responsible process - requires rational thoughts⁶⁶. Due to the dominance of Cartesian dualism, the research on emotions and affects has been subject to a persevering

⁶⁴ See: Jaak Panksepp, “The Cross-mammalian Neurophenomenology of Primal Emotional Affects: From Animal Feelings to Human Therapeutics” in *The Journal of Comparative Neurology* 524(8):1624-1635, 2016

⁶⁵ It is important to note that Descartes is not the only philosopher who has influenced the contemporary theories of emotion. It can be argued that David Hume’s ideas about sympathy had an impact on John Mayer and Peter Salovey’s conception of emotional intelligence (popularized by Daniel Goleman), the Theory of Mind, or neuroscientific studies of mirror neurons (Plamper 23). Plamper explains that Hume suggested that sympathy is a contagious process: “if we observe external signs of emotion in our fellow men (tears, for example, when someone is sorrowful), we construct a mental image of the feelings experienced by this person which can enter into association with one’s own feelings and so in turn give rise to feelings that can determine our own action (for example, giving the person a hug to comfort them)” (23).

⁶⁶ Antonio Damasio refers to this phenomenon as “Descartes’ Error”, arguing that most decision-making is in reality emotion-dependent.

dichotomy: the tension of emotions versus reason, and the discussion of which of this two polarities is more important or more primary. In fact, the contemporary focus on the differences between affects and emotions may be interpreted as an outgrowth of the Cartesian mind-body dualism, as affect is defined as something primarily physical, and emotion as belonging to the domain of cognition.

In the mid-1960s, psychologist Silvan Tomkins created the first affect theory, which asserted the existence of nine affects hardwired in all of us as vital evolutionary adaptations. These are: surprise, anger, disgust, fear, shame, anguish, joy, excitement and dissmell (the impulse to avoid). This affect theory was originally not a cognitive theory, as it is focused on bodily postures, movements, and impulsive physical expressions (Corrigan 9). Some cognitive scientists, however, have been heavily influenced by it, maintaining that emotions are created when a subject makes cognitive sense of the affect: in other words, emotions are “defined by and derived from cognitive reflections upon the responses of the body, rather than being intrinsic to the brain itself” (Panksepp and Biven 12-13). It means that if a person has, for instance, clenched fists, the neocortex (the higher cognitive brain) interprets this physiological response, and labels this affect as an emotion: in this particular case, anxiety or anger. Following this line of thought, only such interpretation of bodily states grants a subjective emotional experience. Such approach bears the name of the James-Lange theory of emotions (or the read-out theory), and was proposed in the 19th century (Panksepp and Biven 12-13). Some psychologists have gone even further in their argument, suggesting that emotions are created only when they are named – in other words, true feelings emerge when we use our linguistic abilities to verbalise them. Regardless of the variations in the read-out theories of emotion, there is one thing that connects them: the equation of consciousness with conscious rational thinking. According to these approaches, emotions stem from the powers of reason (Panksepp and Biven 12-13).

The study of emotion has become central to neuroscience, Plamper argues (225). The neuroscientific works on emotions have become bestsellers: suffice it to mention Antonio R. Damasio’s *Descartes’ Error: Emotion, Reason, and the Human Brain* (1994). Plamper perceives Damasio as the leading neuroscientist associated with the research on emotions, whose work has been quickly adapted by the human sciences, mainly due to the

appeal of the Somatic Marker Hypothesis (SMH)⁶⁷ (214-219). Plamper mentions Joseph LeDoux and Antonio Rizzolatti as other neuroscientists influential in and outside the field, whose theories have been “cited in a growing number of works in the human and social sciences no less frequently than Nietzsche, Heidegger, Derrida, and Foucault were in the 1980s” (225).

Regardless of all the terminological differences, and the tension between emotion and reason inherent in the theories of affect and emotion, there is one crucial polarity around which the study of feelings has revolved: “hard and soft, essentialist and anti-essentialist, determinist and anti-determinist, universal and culturally conditioned” (Plamper 5). “Some scholars view emotions as innate whereas others consider them to be social constructions”, writes Barbara H. Rosenwein on this polarisation between relativism and universalism (qtd. in Plamper 5). According to Plamper, this divisions are the outcome of another crucial dichotomy: nature versus culture (6).

In my work, I argue that Iain Banks is a universalist who understands culture as a biological revolution. For him, all feelings are rooted in the body. I shall, therefore, stick to the essentialist theories of emotion, which I have presented - and shall present - in more detail due to their significance for the purpose of this discussion. Banks approaches body and mind as a continuity, and not as separate entities. He pertains from separating the forces of reason and rationality, or conscious thought processes of his characters, from the phenomena that occur in the physiological sphere of their existence. As Banks in his works refrains from dividing emotions and reason, I have chosen a neuroscientific approach which, in my opinion, is closest to the ideas present in the author’s novels: namely, the theory propagated by Jaak Panksepp in Lucy Biven⁶⁸ in *The Archaeology of*

⁶⁷ According to SMH, emotional signals in the body accelerate and improve higher cognitive processes, such as decision making, while somatic markers themselves are traces left in the brain by the physical expression of emotion. As Plamper explains, according to the SMH “[w]hen an impending decision has several possible outcomes this colours a promising option with a positive emotion. This exclusion of negative options improves decision-making and speeds it up” (214). Regardless of its continuing popularity in the human sciences, SMH is being questioned in the field of contemporary neuroscience (230).

⁶⁸ The introduction of Panksepp and Biven’s approach - as well as the entire history of emotion-related theories - could not be, however, complete without Sigmund Freud, who famously postulated that our drives are rooted in physiological needs. Freud distinguished two kinds of drives: aggression and libido. These drives find their expression in wishful thoughts that possess an affective colour, and the two most prominent human affects are related to wishes about aggressive desires and sexual urges. Freud proposed different types of expression of the aggressive and sexual drives, all of which were, according to him, rooted in various stages of libidinal development (Panksepp and Biven xv). While psychoanalytical views

Mind: Neuroevolutionary Origins of Human Emotions (2012), according to which the brain possesses ancient subcortical regions, which contain at least seven emotional, or affective, systems: “SEEKING (expectancy), FEAR (anxiety), RAGE (anger), LUST (sexual excitement), CARE (nurturance), PANIC/GRIEF (sadness), and PLAY (social joy)⁶⁹”. According to Panksepp and Biven, each of these systems controls specific types of behaviors associated with physiological changes. In other words, when they are stimulated, people experience intense emotional feelings, “and presumably when the systems are normally activated by life events, they generate abundant memories and thoughts for people about what is happening to them (1-2)”. Emotional systems generate consciousness full of affective intensity, which Panksepp and Biven call affective consciousness (12). Thus, Panksepp and Biven do not make a clear-cut distinction between physical affects and cognitive emotions, or between noncognitive feelings and consciousness. In fact, they postulate that affects/emotions may be the essence of consciousness, something indispensable for the development of higher cognitive powers. In other words, feelings emerge from the noncognitive brain functions, generating the physiological changes and instinctual emotional behaviours. Only this capacity allows for the emergence of thought, which is heavily influenced by - or even dependable on - our emotions (Panksepp and Biven 15). “Before it is cognitive, let alone conscious, thought is primordially an affective and aesthetic phenomenon ... In other words, feeling is something that happens without, or before, concepts” writes Steven Shaviro, and then adds that “modern philosophy is generally uncomfortable about this prospect” (Introduction, n.p.), because in most recent philosophical accounts of the mind feeling and emotions play secondary, inferior roles (chap. 3, n.p.). According to Panksepp and Biven, affects are primary experiences, which “shape our subjective lives, influence our behaviors, and mold our relationships”, while the neocortex itself plays a minor role in the generation of emotional responses (Siegel, Foreword, xxv). It is, of course, without doubt that higher brain functions allow for experiencing life at extraordinary cognitive levels, while human uniqueness arises from the complexity of neocortical expansions.

on emotions can be influential for science, they are at the same time impossible reconcile with the neuroscientific knowledge (Panksepp and Biven xv).

⁶⁹ Panksepp and Biven capitalize the names of the emotional systems of the brain (real physical and distinct networks for various emotions), in order not to confuse them with the vernacular usage of the words (18).

Nevertheless, “our higher minds remain rooted in our ancestral past” (Panksepp and Biven, 5).

3.4 IAIN (M.) BANKS: EMOTIONS

In Banks' *The Player of Games*, the main protagonist is Jernau Morat Gurgeh - the Culture's celebrity, a master player of games, who, in spite of remarkable success, is unhappy with his life. Gurgeh has fallen into a trap of inertia and bitterness, wasting his time on endless artificial competitions possessing no real value and no purpose. In the first part of Banks' novel, Gurgeh is presented as a depressed man who drifts from party to party, from game to game, and from lover to lover, unable to get rid of the prevailing sense of meaninglessness. One day, Contact, the Culture's special diplomatic force, offer Gurgeh an opportunity to change his life. Contact representatives want him to travel to the planet of Eä in order to play the game called Azad, which is also the name of the pan-Eächic empire of human-like aliens. Unlike the democratic and communitarian Culture, the Empire of Azad is obsessed with power, domination, and violence. It is ruled by one game, in which all social positions, including the emperor's, can ultimately be won. The Culture, intent on unrigging Azad's extremely unjust social structure, chooses a diplomatic conquest-solution: Gurgeh is supposed to play in the Azad games in order to overthrow the planet's emperor, and dismantle Azad from within. Gurgeh does not know the ultimate purpose of the Culture, but, at the same time, he does not care too much about politics. All he is interested in is the game itself⁷⁰.

The *Player of Games* is dense with descriptions of the characters' feelings and affects. When Gurgeh is playing games, he is:

[a]wash with a bitter-sweet flood of new and enhanced emotions; the terror of risk and possible defeat, the sheer exultation of the gamble that paid off and the campaign which triumphed; the horror of suddenly seeing a weakness in his position which could lose him the game; the surge of relief when nobody else noticed and there was time to plug the gap; the pulse of furious, gloating glee when he saw such a weakness in another's game; and the sheer unbridled joy of victory. (*The Player of Games* 194)

⁷⁰ Simone Caroti admits that the description of play-related processes, or themes and motifs associated with gaming, permeate Banks' literary output (63). He agrees with Will Slocombe (2013), who argues that for Banks', games constitute "symbolic signifiers of our struggle to understand ourselves and our lives" (qtd. in Caroti 63). I do not agree with the statement that play has a symbolic function in Banks' oeuvre. I believe that its role is much more straightforward.

Iain (M) Banks' novelistic endeavours exhibit an obsession with the workings of the human brain including the production of affects. *The Player of Games* offers countless descriptions of emotions which, in the novel's universum, are far from being unimportant. They are regarded as a building block of consciousness. This goes in line with Panksepp and Biven's observations, which prove that feelings constitute a fundamental substrate of awareness.

Banks undoubtedly possesses some knowledge about the structure of the brain. In *Excession*, he describes the human brain as consisting of "higher functions", "the lower mammal brain", and "the primitive, nearreptilian centre" (225). What's important to note is that Banks puts the ancient, primitive brain structures at the core of human neurobiological existence. When a friend of Gurgeh asks him what is really true in the world, the player of games puts "intellectual achievement" and "the exercise of skill" alongside "human feeling" (*The Player of Games* 6). The most cherished, critical moments in Gurgeh's life are connected with fierce emotions, experienced simultaneously on sensory and psychological levels:

The circular wafer was lying, uncovered, almost right in front of him on the table. 'Ah,' he said, and only then felt the blood rise to his face. 'Here it is. Hmm. Couldn't see it for looking at it.' He laughed again, and as he did so felt a strange, clutching sensation coursing through him, seeming to squeeze his guts in something between terror and ecstasy. He had never experienced anything like it. The closest any sensation had ever come, he thought (suddenly, clearly), had been when he was still a boy and he'd experienced his first orgasm . . . that first time had nevertheless been one of his most memorable experiences; not just because it was then novel, but because it seemed to open up a whole new fascinating world, an entirely different type of sensation and being. (*The Player of Games* 39-40)

For Banks, sensation and emotion are inseparably connected with awareness, and his point stays in accordance with Panksepp and Biven's thesis that feelings create consciousness full of affective intensity, in other words, an affective consciousness (13). Banks perceives affects as primary ontological experiences that are something more than just arbitrarily-named changes in the body. Gurgeh feels pure rage when he watches the cruel behaviour of Azadians: he does not flinch, nor turn away, while he confronts the outrageous scenes of injustice and exploitation (Banks, *The Player of Games* 209). When

rage begins to interact with Gurgeh's cognitive patterns, he uses it to feel victorious, make quick decisions, and to subjugate his rivals (191). Fear is also well known to the game player: at a certain point of the novel, Mawhrin-Skel, the Culture's Special Circumstances drone, paralyses Gurgeh and threatens him with death. It purposefully engenders tension as well as immobility, so that Gurgeh may feel fear in its purest form (58-59). Banks also shows that at the most advanced levels of cognitive activity we tend to be voluntarily "entertained by having our primary-process systems manipulated in situations where we are in fact safe" (Panksepp and Biven, 16). Whilst playing, Gurgeh feels "the rush of that delicious fear" (Banks, *The Player of Games* 52), therefore he engages in risky confrontations. Nevertheless, the central affect around which the novel is organised seems – at least at first sight - to be the joy associated with play.

According to Panksepp and Biven, PLAY is a neural mechanism that provides the experience of social joy, and helps to understand the emotional states of others. For Gurgeh:

[i]t added a lot to the game to play as part of a team; he felt genuinely warm towards the apices he played alongside. They came to each other's aid when they were in trouble, they trusted one another during massed attacks, and generally played as though their individual forces were really a single side. As people, he didn't find his comrades desperately engaging, but as playing partners he could not deny the emotion he felt for them, and experienced a growing sense of sadness - as the game progressed and they gradually beat back their opponents - that they would soon all be fighting each other. (Banks, *The Player of Games* 237-238)

A widespread definition proposed by Gordon Burghardt (2005) states that play is a spontaneous and pleasurable behavior whose adaptive functions are not clear at the moment of playing, and which repeatedly appears among unstressed, healthy individuals (81). In the empire of Azad, playing games usually means something utterly different, since it is a carefully organised, ritualized and planned activity. The game of Azad serves a clear function: individuals engage in it in order to gain better positions in the heavily stratified society. This game cannot be distinguished from the political, economic and cultural system on Eä. It basically equals life with all its dangers (Banks, *The Player of Games* 76). The purpose of Azad is not play itself, but the regulation of political life

through oppression, segregation and the imposition of hierarchies (Lippens 139). In fact, in *Excession* Banks introduces another galactic society, the Affront, for whom “fun was serious”, and a “training for when you became an adult” (97-98). Play is not always pure, innocent fun, there is often something else behind it. Not in the Culture, though: among its citizens, pure play is a virtue, since by providing joy it enhances social connectivity and empathy. The characters acknowledge that victory does not matter: only the fun does (Banks, *The Player of Games* 21).

Gurgeh seems not to fit into this society, since playing for him equals the anticipatory euphoria, an irresistible urge for something more (196). He plays with an egocentric purpose, so that he can “feel real” (21). Panksepp and Biven note that the basic, oldest and dominant instinctual-emotional system of the brain is the SEEKING system, which allows creatures to search for and acquire resources indispensable for survival. Arousal of this system promotes “anticipatory euphoria as opposed to any pleasure of consumption: initially, it is just a goad without a goal” (96). It is easy to see this system in action when resources are scarce, and one has to find them in order to survive. However, Panksepp and Biven note that the primary role of this system is not as visible in modern human societies. In the realm of Culture it mainly appears to be obsolete. The main thing that the people truly crave and seek is becoming a part of Culture’s special forces:

In a society in which it was possible to look however one wanted to look, acquire any talent one wished to acquire and have access to as much property as one might desire, it was generally accepted that the only attributes which possessed that particular quality of interest which derives solely from their being difficult to attain were entry into Contact and Special Circumstances. (Banks, *The Player of Games* 197)

Discussing one of the ancient games adapted by the Culture, Gurgeh argues that:

[i]f somebody wanted a house like this they'd already have had one built; if they wanted anything in the house . . . they'd have ordered it; they'd have it. With no money, no possessions, a large part of the enjoyment the people who invented this game experienced when they played it just disappears. (21)

The arousal of the SEEKING system allows for “an enhanced sense of oneself as an effective agent in the world. In the social world, this entails feeling important, attractive, successful, and superior” (Panksepp and Biven 98). Gurgeh lacks these feelings, craves them, and thinks that the Culture is a flawed society in which the individual is useless, having no influence on reality (Banks, *The Player of Games* 22).

SEEKING keeps us in constant engagement in the world. If this state is impossible to be sustained, depression creeps up. In their discussion of affective consciousness, Panksepp and Biven resort to scientific evidence that animals may even sacrifice their lives in order to achieve some stimulation of the SEEKING brain circuitry. In *Look to Windward*, Banks describes a situation in which the Culture people are so desperate to attend a live concert, that they resort to cheating and reinventing money, even though they could experience the music anywhere in the Universe as vividly as in the venue itself. As Banks explains:

[T]here was, for almost everybody occasionally and for some people pretty much perpetually, an almost inestimable cachet in having seen, heard, smelled, tasted, felt, or generally experienced something absolutely and definitely for real, with none of this contemptible virtuality stuff getting in the way. (351)

Real experience is treasured and desirable, even though the Culture’s perfect simulations of reality may grant exactly the same kind of visceral and emotional reaction to the people. Banks pinpoints that people living in a post-scarcity, perfect society are still are eager to find things that they have to crave and fight for. The urge is so strong, that scarcity becomes recreated, and *Look to Windward* abounds in fragment describing this phenomenon. One of the characters delves into a following rumination on the nature of the human being:

What intelligent creature possessed of wit and feeling could do otherwise? We always want more, he thought ... The animal in him craved something that his higher brain knew was not going to happen.
This was ... that struggle of the lower brain’s almost chemical simplicities of yearning pitched against the withering realities revealed and comprehended by consciousness. (36)

This fragment may serve as an illustration of Banks' interest with the workings of the mind as well as of the knowledge about it he is in possession of. The SEEKING-generated urge, this yearning to fight and to achieve, is for Banks the crucial element of being, the most basic one - which can be, of course, understood and rationalised, but can never be discarded. This primitive aspect of the brain is what constitutes a crucial aspect of our being. The Culture's citizens fight for places at the concert, or just spend time travelling, persisting in "hoping that something they think they'll find in the place they're heading for will somehow provide them with a fulfilment they feel certain they deserve and yet never come close to experiencing" (Banks, *Look to Windward* 113). One of the main protagonists of *Look to Windward*, Mahrai Ziller, concludes that "all naturally evolved sentient life is restless" (114). This impossibility of fulfillment and biological restlessness is what defines each individual, because humans crave struggle, and "the sense of achievement is produced by the route to and from the peak, not by the peak itself" (Banks, *Look to Windward* 300). Jacobs, in his reading of the Culture novels, suggests that "there's no such thing as a society without scarcity – a society without loss or longing" (52). I agree with Jacobs' argument that "Banks knows that not all struggles are boring or pointless, as do the citizens of the Culture who try to restore unpredictability and drama to their lives. Indeed, the very existence of Contact and its Special Circumstances unit expresses this need for struggle" (56). Longing can be treated as an innate characteristic of a living being. Thus, people crave drama, unpredictability, and powerful emotions associated with overcoming an obstacle and achieving a goal.

Furthermore, the dopamine-mediated feeling of euphoria is highly addictive: "many of us are workaholics. Drug addiction is rife. We are overeager to check our emails, to gamble . . . without our stopping to carefully consider what we are doing" (Panksepp and Biven 101). In *The Player of Games*, the more Gurgeh plays Azad, the more domination and power he craves, feeling "like a wire with some terrible energy streaming through him . . . a god with the power to destroy and create at will" (Banks 272). Gurgeh finally loses control of his own endogenous drugs, possessing only one absolute determination to "win, dominate, control" (272). He is so fiercely possessed by the addictive euphoria that he has to be reminded by the drone to eat and sleep (274). Over-stimulation of the SEEKING system may lead to such behaviours, as well as to the

emergence of rituals (Panksepp and Biven 108). Banks shows that the empire of Azad is obsessed with tradition and ritual in spheres as diverse as politics and clothing (*The Player of Games* 127). As I have already explained in the previous chapters, rituals emerge, because people need to feel that they are effective agents, even if it is just an illusion in a reality ruled by luck and chance.

Banks argues that the idea of the self is created in a diversity of visceral reactions, actions, and emotions. It is something that grows out of a network of basic biological processes – it is not a thing separate from them. Such an approach goes in line with a recent change of paradigm in neuroscience, which Shaviro explains as the dissatisfaction “with the old stimulus/response model, according to which animals (and other organisms) passively respond to prior, incoming stimuli. ... Much more importantly, biological entities are active reality-testers. ... Rather than just responding to stimuli, they exhibit ongoing activity that is self-generated and only secondarily modulated by stimuli” (Introduction, n.p.). Active immersion in the reality of Azad equals for Gurgeh the construction of the self. While he is waiting for the games to begin, his hands are shaking, his belly churns, he feels thrilled and sharp-witted (Banks, *The Player of Games* 141-142). He finally gains a direct experience of his own body, connected with nothing but pure life. Before he visited Azad, he used to artificially analyse and suppress his sensations:

There: that red-black scent of roasted meat; blood-quickenning, salivatory; tempting and vaguely disagreeable at the same time as separate parts of his brain assessed the odour. The animal root smelled fuel; protein-rich food; the mid-brain trunk registered dead, incinerated cells... while the canopy of forebrain ignored both signals, because it knew his belly was full, and the roast meat cultivated. (*The Player of Games* 8)

Only on Eä does Gurgeh learn to truly feel and act: his earlier life could be defined as a state of more-or-less senseless inertia. In the Culture, free, instinctual action and the expression of strong emotions was undesirable, as is especially visible in the case of drone Mawhrin-Skel (*The Player of Games* 14-15). Panksepp and Biven suggest that the activity of primary emotional systems is responsible for the rise of affective consciousness, which is focused especially upon acting in the world (389-425).

3.5 FRAMEWORK: ACTIVITY AND PERCEPTION

Panksepp and Biven's work indicates another aspect associated with consciousness, which is especially useful for the purpose of this discussion. Namely, they argue that instinctual actions are foundation for consciousness:

The midline systems that generate and regulate emotionality are continuously involved in self-related ("What's in it for me?"-type) processing of external information. In this way we can again envision how all mammals are "active" information-seeking creatures rather than just "passive" information-integrating ones. (421)

Thus, affects and actions are at the core of who we are. Such a view is widespread in the field of neuroscience: Antonio Damasio suggests that the brain is not a passive medium, a film, on which different objects and sensations can be faithfully recorded, and if areas of the brain responsible for the execution of movement or emotions are damaged, consciousness is lost (*Self Comes to Mind*, chap. 3, n.p.). Neither is brain a disembodied, computer-like device: "minds evolved to make things happen . . . Minds make motions, and they must make them fast – before the predator catches you, or before your prey gets away from you" (Clark 1). The body as represented in the mind plus all the emotional systems interacting with higher brain functions finally allow for the emergence of higher, autobiographical consciousness: that is, the self (Damasio, *Self Comes to Mind*, chap. 1, n.p.).

From the modern scientific and philosophical perspective, seeing also counts as an activity. According to enactive theories of vision (which go in line with theories of embodied and enactive cognition), perception does not amount to a passive reception of stimuli, but is an active process. We enact our realities by selective interaction with the surroundings. Psychologist Kevin O'Regan and philosopher Alva Noë propose a "sensorimotor theory of vision", which is based on the argument that vision is action, viewer is an actor, and therefore whatever we see are those elements of the scene that we are currently visually manipulating by interactions (such as eye and body movements, or blinks). Not manipulating the world means that it drops back to a void (Susan Blackmore 65).

3.6 IAIN (M.) BANKS: ACTIVITY AND PERCEPTION

Acting in the world is the main topic that *Transition* (2009) raises. When at one point a character possessing the ability to travel between parallel realities states that most worlds “are unenvisageable, and because we cannot imagine going to them, we cannot go to them” (375), Banks points to the fact that perception is always active and creative. This idea has been present in numerous Banks’ novels since *The Player of Games*, whose narrator, drone Mawhrin-Skel, states that “we are what we do, not what we think. Only the interactions count (there is no problem with free will here; that's not incompatible with believing your actions define you) . . . I say again; you is what you done. Dynamic (mis)behaviourism, that's my creed” (231).

Banks’ characters always gain self-awareness, because they are all active reality testers, and not passive recipients of incoming stimuli. This way, they resemble actual human beings. In *Transition*, the labyrinths of parallel worlds exist only when the characters perceive, and consequently traverse them. Worlds are created by the process of visualising. In other words, people create reality by the means of perception understood as active immersion in the world with all their senses. This means that even though there is real world surrounding us, it is always filtered through our senses, our brain and body. Our reality is always an individually tailored image, but it is not less real than the material world itself.

Transition is, hence, not only a book about the powers and limits of imagination and perception, but also about consciousness. Banks describes the transitionaries as always being “some lopsided distance along the selfless – selfish spectrum, and clustered close to the latter, hard-solipsism end” (161-162). The issue of solipsism is crucial in the context of *Transition*, because, paradoxically, the more solipsistic the characters are, the vaster and more multifarious their reality seems. In other words, the greater the solipsism – the greater the awareness. As Stephen P. Thornton explains in an article for the Internet Encyclopedia of Philosophy, according to the doctrine of solipsism, existence is limited to everything an individual experiences – in other words, their own perception - and consequently - consciousness. An exemplary solipsist is an egocentric individual who does not attach any importance to the existence of thoughts, perspectives, emotions, and

experiences different than one's own. The foundations of this doctrine underlie the numerous post-Cartesian ideas, such as the concept that each individual develops their views and psychological make-up on the basis of personal experience. Solipsism, traditionally, goes in line with a number of prominent philosophical presuppositions: the belief in the primary importance of the contents of one's mind, the idea that there is no necessary connection between mind and matter, as well as the view that any experience of an individual is ultimately private and ungraspable for others. In his take on solipsism, Banks is of course acknowledging the inherent connection between mind and matter. He perceives mind and consciousness as the products of biology, but nevertheless acknowledges that, paradoxically, the images and the narratives the brain produces constitute the illusory reality which seems to us the most real. In *Transition*, Banks illustrates this view by treating solipsism as the requirement for successful transitioning – which means creating a certain world in one's mind and entering it. This created image is the only reality that exists for a human being. There is no possibility of objectively reaching beyond. The smallest part to which the reality can be reduced is the single subject that creates it:

Infinity goes in only one direction; outward, into more inhabited worlds, more shared realities. In the other direction, on a reducing scale, once you reach the level of an individual consciousness – for all practical purposes, a single human being – you can usefully reduce no further. It is at that level that significance lies. (*Transition* 146)

As a whole, the universe in *Transition* cannot be observed and understood: it is “ungraspable”, and one cannot look at it from the outside, because there “could be no outside” (Banks 122). Doomed for lack, emptiness, and the infinities of the unknown, human beings cannot see outside their ever-expanding universe(s). The reality is lacking, but an individual is always dreaming of grasping the world in its fullness.

The quest for disposing of the mind-created illusions and reaching out for the tangible truth is constantly present in *Transition*. Patient 8262 elaborates on “a world, an Earth that was close to unique”, a parallel reality called Calbefraques, which “could act as a gateway to any other version of Earth” (Banks 247). Calbefraques, however, is no more real than the other worlds perceived by the transitionaries. It is composed of fragments of

countless worlds, so that, as a complicated, collectively creative enterprise, it creates the illusion of being the most important and the most real. In the Culture novels, the case is similar with virtual reality worlds: the senses and the minds of individuals entering them are absolutely convinced that the world surrounding them is palpably real. The humans (and the Minds as well) are so much prone to believe in the virtual reality illusions, that the Culture introduces “synthetic cues into the experience just to remind the subject that what appeared to be real really wasn’t” (*Look to Windward* 351).

For Banks, it is impossible to escape from one’s subjective, highly limited point of view, which is always grounded in the physical, immediate aspect of existence: emotions and senses. The mind is the creator of the worlds and the selves, as it allows for feeling and acting. Sensing, feeling and acting are, in turn, the foundations of being - the substrates of consciousness. In *The Player of Games*, the game of Azad awakens in Gurgeh powerful emotions, an intention to act, so that he can “survive” the fierce competition. While Gurgeh learns how to play Azad in a laboratory setting of a starship, he realises that only complete immersion into the game (with all the accompanying vulnerabilities, physical sensations and worries) will shape proper cognitive processes, allowing him to master Azad fully (Banks, *The Player of Games* 82).

3.7 IAIN (M.) BANKS: THE BODY

To Banks, human brain equals pure materiality, out of which grow all the ideas we possess about the self and the world we are immersed in. That is why the concept of embodiment should be raised within this discussion of the idea of consciousness which emerges from Banks' literary works. To recapitulate: since Descartes dignified the mind/body dualism by depriving the mind of any physical features, a breach has existed between matter and idea, as well as between mind and material substrate. However, as the studies of consciousness have been brought into biological context, the mind/body problem, otherwise known as substance dualism, gradually dispersed: brain and mind sciences provided a counterbalance to the long-established prevalence of a traditional rationalist idea of the body as a container for the independent mind, as well as offered an alternative to the postmodernist view that the body can be compared to a blank slate to be culturally inscribed by disembodied discourses. Consciousness is no longer understood an ontologically distinct substance, "but rather an emergent property of matter put together in a sufficiently complicated way" (Slingerland 10). In other words, cognitive studies popularised the opinion that consciousness and the sense of self are the products of processes happening in the material body. This opinion is also present in Banks' *Use of Weapons*, where a drone tells Zakalwe that his "brain is made up of matter" and "organised into information-handling, processing and storage units" by genes and biochemistry (256). In *Surface Detail*, one of the AIs tells a human character that embodiment is all that matters:

[a]n intelligence completely dissociated from the physical, or at least an impression of it, was a strange, curiously limited and almost perverse thing, and the precise form that your physicality took had a profound, in some ways defining influence on your personality. (150)

As Jude Roberts put it, the body plays a "fundamental role in the constitution of the subject as a subject", but, more importantly, "the body changes over time and can be changed intentionally, and it is in part through these changes that subjectivity is constituted" (47). Roberts observes that Banks' characters are fundamentally vulnerable,

because they are always embodied (48). In his novels, Banks provides descriptions of different bodies, their functions, faculties and limitations. Genar-Hofoen, one of the main protagonists of *Excession*, for instance, dreams of possessing the body of another species, an Affronter one, because only then could he “just be an Affronter”. Then, he would “really be able to relate to these guys”, he “could really be one of them” (Banks 63). It is possible for Genar-Hofoen to change the body, because the Culture reached a stage of development in which one could switch between sexes, or inhabit the chosen form of a different species (Banks, *Matter* 80). The randomness of genetic inheritance is in the Culture replaced by “a kind of democratically agreed physiological stasis-plus-option-list while handing over the real control of one’s society to machines” (Banks, *Excession* 170). This “physiological stasis-plus-option list” equals genetic and nanotechnological augmentations, routinely performed on humans. Banks offers detailed descriptions of these augmentations, presenting them as desirable phenomena which would lead to maximising the quality of human life. To begin with, Culture’s humans can, for instance, possess wings and fly freely, and their sensual experiences are also heightened: sex, eating, and play are incommensurably more pleasurable in the case of, using Banks’ terminology, genofixed humans. Joseph Norman notes that the Culture’s inhabitants “are free to customize every detail of their lifestyle, their surroundings, and their own bodies, as they see fit” (117), while in his essay *A Few Notes on the Culture*, Banks states that “virtually everyone in the Culture carries the results of genetic manipulation in every cell of their body [and] it is arguably the most reliable signifier of Culture status”. Genetic engineering is thus common and desirable, and bodily customisations are characterised by their diversity, though most of them are aimed at “improving overall health, longevity and quality of life” (Joseph Norman 119). Staple genetic manipulations guarantee that all Culture’s inhabitants are born healthy, with their immune systems greatly improved and senses enhanced, so that birth defects, infectious diseases or inheritable illnesses pose no longer a threat. Banks explains that “humans in the Culture normally live about three-and-a-half to four centuries” (*A Few Notes on the Culture*, n.p.). Nevertheless, bodily augmentations and transformations do not only serve the improvement of the quality of life. They have much graver consequences. Genar-Hofoen’s transition into an Affronter’s body is one peculiar - or even extreme - example, but there is also a phenomenon called

“glanding”, which is encountered in the Culture on everyday basis. In short, the Culture citizens are equipped with additional glands in their bodies, which allow for willful production of endogenous, experience-enriching drugs. One of the characters notes:

[t]he idea of a chance meeting with somebody else ... just because it was all up to chance and up to negotiation, just because it all might end in nothing, in rejection, in the failure to impress and connect, in being found wanting rather than being wanted, that was a more valuable thing, that was an enterprise well worthy of the risk of rebuff.

He glanded charge. That ought to do it.

Seconds later, filled to bursting with the love of action, movement and the blessed need to be doing something, he was bouncing out of bed, laughing to himself. (Banks, *Excession* 220)

Drugs generated in the character’s body make him feel energetic and ferociously happy. He does not have to look for stimuli, engage in dangerous activities or risky games, like Gurgeh does. Thus, glanding not only makes life pleasurable – most importantly, it makes it bearable. When existence in the Culture becomes too harsh, there are always substances one can instantly resort to. *Excession* portrays a female character, saddened by her looks and childhood memories:

[w]hat mattered was that she looked old and dowdy and that would make her feel old and dowdy and therefore that would make her behave old and dowdy ... She bit the pillow, and the particular texture of the fabric in her mouth and between her teeth, and the sensation of her face being puffed-up while her eyes stung with tears, took her back to childhood again.

She thought about glanding some calm, but decided not to. (Banks 196)

In the Culture, using endogenous drugs is voluntary. People can always choose to face their problems and fears, actively engaging in behaviour which would lead to a certain emotional result, but they rarely do so, because glanding makes existence easier and much more intense at the same time.

The medication to all problems is available right away. There is no psychoanalysis, no therapy in the Culture, and no mental hospitals. Glanding solves all problems. This, I think, is important - especially if one takes into consideration the fact

that classic psychoanalysis is based on interpretation as the main tool. As Panksepp and Biven state:

Psychanalysts tended to concentrate on the relationship between affective states and their corresponding cognitive manifestations (wishes). They have long assumed that by interpreting relevant thoughts and ideas, by uncovering their origins in childhood and explaining their primitive emotional meaning, a patient will be cured. (xvi)

In other words, psychoanalysis sees cognitive issues as a gateway to emotional ones. A therapist traces the origins of certain problems and behaviours in the past, and interprets them. For example, a bully who was abused by his father may now be violent, because he needs to vent his rage on individuals that will not retaliate, or – according to another possible interpretation – attacks others in order to restore his masculine sense of self-worth. According to neuroscientists, the problem with psychonalysis is that it does not examine the biological grounds behind behaviours. Considering the above-mentioned case of bullying, Panksepp and Biven argue that the abuse may have sensitized the patient's FEAR and RAGE systems so much, that the related affects are even impossible to quell. A therapist may be right about the origins of the patient's problems, and the patient might be perfectly aware of them and the terrible effects violent behaviour has on other people. Such consciousness, however, may not be enough for a cure: a bully with sensitized FEAR and RAGE systems “would still suffer from an overwhelming irritability, which may present itself as an apparent wish to bully” (Panksepp and Biven xvii). Neuroscientists believe that in order to truly help people, biochemical treatment is needed, and that advanced medicaments could allow for successfully managing emotions (Panksepp and Biven xvii). Banks is sharing this opinion. In his Culture novels, there is no space for psychoanalysis or other forms of therapy, even though the characters suffer from distinct and diverse traumas - or could actually suffer - were it not for the glanding phenomenon and the possibility to produce endogenous drugs, which effortlessly manage a Culture citizen's emotional state.

The big goal of safe and voluntary drugging is, however, making humans reluctant to strive for anything, to struggle and seek, as the feelings of accomplishment and power can be endogenously generated. Thanks to glanding, the Culture's citizens do not

normally question the sense of their existence in a reality in which “it was possible to look however one wanted to look, acquire any talent one wished to acquire and have access to as much property as one might desire” (Banks, *Excession* 197).

Genofixing exists to make people more pliable, messing with their emotions, and, consequently – consciousness. According to Banks, what the future might bring is, first of all, the emergence of superintelligent machines, which, ideally, are going to change the universe in a reality of opulence and happiness. This may lead to humans becoming “mere animals” (*Excession* 52), or pets for the machines. Just like the docile species of domestic animals evolved with humans, so the humans are going to evolve alongside AIs, probably gaining in the long run a set of certain, culturally-desired (or in the specific case of Banks’ novels, Culturally-desired) traits. It is important to note at this point that with the AIs explicitly tinkering with biological substrate, nowhere in *Excession* is it stated if the biological characters are being bred selectively, or genetically pre-modified in order to possess desirable qualities, traits, and motives. Such situation would definitely be viable - especially if we consider the agenda of the ruling machines, which is to propagate pangalactic equality and happiness⁷¹ - but it proves to be enough to equip organisms with additional glands, modifying their sensations as a result, and providing them with an unlimited access to ready-made emotional states, which, in turn, influence their perceptions, and shape their images of the self.

People of the Culture may have their bodies regrown or cloned, in order to become – to a certain extent – immortal. They understand that their regrown bodies would always consider themselves as real, because it is impossible for the mind to dispose of an illusion of an inner self. Still, the Culture citizens have qualms. This illustrates the tension between what they know about the creation of the self, and the fact that they cling onto the idea that it won’t really be “them” when they are regrown or cloned. Besides, it is hard to accept that together with a new body comes new experience, which makes a clone a different entity with a different identity. As Ivaylo R. Shmilev observes, living organisms cannot be duplicated in the long run, because they change with time: in the Culture, clones are not identical with the cloned (62).

⁷¹ The Culture’s Minds also have their parameters fixed by their constructors (other Minds), not unlike biological beings. Various characteristics are modified, such as aggressiveness (for warships) or introversion-extraversion.

Another aspect of the embodied mind which is thematically close to the issue of cloning is discussed by Banks whenever he is referring to the possibility of uploading the mind to another substrate. This equals “an acknowledgement that mind arose from matter, and could be fundamentally and absolutely defined in material terms” (*Look to Windward* 162-163). The Culture’s inhabitants “could record their mind-states, effectively taking a reading of the person’s personality which could be stored, duplicated, read, transmitted and, ultimately, installed into any suitably complex and enabled device or organism” (Banks, *Look to Windward* 162). As Shaviro puts it, intelligence is heuristic, which means that the mind always operates within some particular material context, regardless of whether it is biological or virtual. There is a finitude and limit to cognitive powers: the mind always operates inside a certain body, within the world, and in concert with other entities. It is, therefore, always emotively based, embodied, as well as situational (chap. 3, n.p.). What is also important, is the fact that not only the human-basic brain depends on the human-basic flesh, but the AIs of his novels have their consciousness embedded in and limited by matter, as well. Banks refers to this fact as the Dependency Principle: the Culture’s Minds are also predominantly material and defined by their own substrate and structure⁷². The only thing that one could do in order to dispose of the reliance on the material universe was to Sublime, and – as I already explained - this is not a choice that the Minds would like to make. I agree with Alan Jacobs, who suggests that Banks’ Minds are limited in their cognitive powers: they are unable to predict the way in which different beings would behave. All they can infer and deal successfully with is the behaviour of the Culture’s members (47). Their consciousness is embedded in, and limited by, their own materiality, as well as the materiality of their environment. Thus, even in the ultra-advanced, post-scarcity world consciousness is still an illusion, and seeing beyond one’s own self proves difficult, if not – at times – impossible.

⁷² In *Look to Windward*, Banks describes the backstory of the Chelgrians, whose social order once was exceptionally strict caste-based, so the Culture’s Contact section intervened in order to reconstruct the Chelgrian society along liberal and egalitarian lines. This resulted in a civil war and the death of billions of Chelgrians. The Culture’s Minds somehow did not foresee this happening, just as they did not comprehend the political situation on Azad in *The Player of Games*.

3.8 IAIN (M.) BANKS: DREAMS

Iain Banks' third mainstream novel, *The Bridge* (1986), is a study of a society which is utterly different than the Culture: it suffers from space and resource scarcity⁷³. Banks tells the story of Alex Lennox, a rich, well-educated Scot, who suffers from a car accident and, consequently, falls into a coma. Alex in his dreams re-visits not only episodes from his previous life, but also becomes John Orr, an amnesiac living on the bridge (an endless, stratified structure housing thousands of people). Orr undergoes psychoanalytical treatment with Dr Joyce (so that he can regain his memories) and searches for the truth about the bridge. In some of his ruminations, Alex changes also into a barbarian warrior who, describing his ventures in a broad Scottish dialect, fights monsters, rapes women and pillages castles somewhere in a mythical realm, all the while accompanied by a talkative familiar perched on his shoulder. These three characters constitute one person: as the bridge collapses, the different voices merge, and Alex Lennox finally wakes up. Banks' work could easily be analysed from the perspective of Freudian theory with all its references to the dream work and the tri-partite structure of consciousness: Alex Lennox could be seen as the ego, the barbarian as the id, and John Orr could represent the superego. Banks' narrative is, however, neither an excursion into the territory of dream theory, nor a traditional psychoanalytic tale of self-discovery. The novel is post-, or rather anti-Freudian.

As is the case of *The Player of Games* or *Transition*, *The Bridge* can be attributed with a preoccupation with questions concerning how consciousness is created, and what constitutes the sense of self. Views concerning the human mind are expressed in a straightforward manner even in Alex's hallucinatory stream of consciousness:

Respool, rewind; back to the beginning it was the mind/brain identity problem. Ah HA! No problem (pew, glad that's settled) no problem of course they're exactly

⁷³ In his analysis of *The Bridge*, Martyn Colebrook acknowledged the influence of Alasdair Gray's *Lanark* on Banks' work, and discussed it as a novel thematically preoccupied with the criticism of a totalitarian stratification of society, in which the populace cannot think or act independently (37-53). I, however, intend to stray away from the traditional interpretations, and approach *The Bridge* from a cognitive perspective, trying to explain the way it deals with the topic of consciousness.

the same and totally different; I mean if yer mind isnae in yer fukin skul wharethefuk is it, eh? (*The Bridge* 125)

Alex is a geologist and an engineer, believing in science, reason, and “a sort of Unified Field Theory of the consciousness . . . emotions and feelings and logical thought together; a whole, an entity however disparate in its hypotheses and results which nevertheless worked throughout on the same fundamental principles” (*The Bridge* 139-140). *The Bridge* mirrors *The Player of Games* in its obsession with affects, which accompany Alex both in his professional career and his love-life. Alex wants “more than he can handle” (Banks, *The Bridge* 323) even in his dreams, which constitute narrative’s major part.

Banks opposes Cartesian dualism and the resulting split between the brainless mind and the mindless brain, while he believes in a unified consciousness which is a property of different interconnected states of the mind and the body: such as being awake and the REM sleep. According to J. Allan Hobson, the Freudian division of mind into ego, superego and id, as well as the discrepancy between dreams and being awake are remarkably superficial attempts at transposing dualist philosophy onto the sphere of brain science (“Ego Ergo Sum” 143). Thanks to the popularity of psychoanalytic theories, throughout most of the twentieth century “dreaming was seen as an unconscious mental process”, while it is, in fact, another facet of consciousness whose content is transparent and shall not invite any antiscientific, symbolic interpretations (Hobson, “The William James Lectures” 4). Nicholas Tranquillo states that according to Hobson, dreams are not built from day residue: they recombine elements possessing strong emotional connotations and biographical bearing (xii). Moreover, chance plays a huge part in the shaping of dream plot (Hobson, “The William James Lectures” 17). No wonder that Dr Joyce, Orr’s psychiatrist, does not find any hidden meaning in his patient’s dreams (Banks, *The Bridge* 23-24, 59-61). Orr wanders hither and thither in a reality that does not make any sense: planes come from nowhere to skywrite in Braille, television shows only some random hospital bed, and Orr can’t even identify the language in use. Although the dream-world is Alex’s/Orr’s/barbarian’s creation, he is unable to control or explain it (Kincaid, “Far Too Strange” 28).

Without doubt, REM sleeping tends to be like a “drunken sailor’s walk” from association to association (Stickgold 89). According to Hobson’s activation-synthesis

hypothesis, dreams are narratives glued together by the forebrain to justify biochemical changes and electric pulses arising in the brainstem (Hobson, “The William James Lectures” 32). Dreams are, nevertheless, building blocks for waking awareness: they are paving the way to a coherent sense of self, emotions, motility and sensations (Hobson, “The William James Lectures” 5). It is now known that REM-like neuronal activation is responsible for early brain development, subsequently becoming a link to a fully self-aware waking state (Hobson, “The William James Lectures” 53). Dr Joyce tells Orr that not only must he realise that the bridge is a dream, but he has to notice at the same time that dreams are the first step on a path towards something different, a land on the other side (Banks, *The Bridge* 24). Through merging memories and free associations, sleep facilitates the emergence of regularities as well as meaning metaconstructs. Preexisting information is integrated to enhance future action, “helping to create both an understanding of the world and a sense of the self in time” (Stickgold 76-77). In Alex’s dreams, speed-driving is a prominent motif, memories of his romantic relationships are relived in a fantasy setting, beloved Forth Bridge turns into a gigantic, state-like structure, tourist trains invite Orr into a reality consumed by war and chaos, while he himself becomes his own childhood nightmare: the bloodthirsty warrior, destroying everything and everyone on his path.

Dream stimuli come from the brain itself. There is no sensory input, and still data generated internally mirrors this originating in the external reality. As I already noted in the discussion of neuroscientific approaches towards consciousness, the human brain may possess a model of the body. Because of all the endogenous activation and stimulation, the dreaming brain is tricked into feeling awake (Hobson, “The William James Lectures” 32). People usually do not question anything that happens in their dreams: Orr is sweating and panicking, when a vicious train chases him, and he is absolutely unable to escape via leaving the rail-tracks (Banks, *The Bridge* 164). Panksepp and Biven note the importance of emotions in dream generation, focusing most prominently on the dopamine-mediated SEEKING arousal. The stimulation of emotional circuitry allows for creating novel cause and effect relationships (376-377). Hobson also points to the fact that dreaming is charged with emotions which are more powerful than these present in waking, and anxiety, anger or elation are the principal ones (“The William James Lectures” 19). Orr invariably

emphasises his growing frustration and annoyance (Banks, *The Bridge* 51, 89, 151), his hands shake with anxiety when he does not succeed in finding the doctor's office (57-58), or when he is moved to a much worse part of the bridge (173). Alex's dreams contain explicit sexual desires, especially when he becomes the barbarian (105). In fact, emotions that tend to appear in dreams are thought to play a basic role in survival. Thus, inducing them in REM sleep may prepare the mind to react with fight, approach or escape in waking life (Hobson, "The William James Lectures" 40-45).

In REM sleep, logical reasoning is inhibited, while emotionality takes over (Stickgold 81-82). The brain is self-activated and offline to the outside world, deprived of working memory, self-reflective awareness and planning abilities (Hobson, "The William James Lectures" 32, 45). This is why the barbarian may lack any insight, engaging instead in pure action (Banks, *The Bridge* 94-98). When Orr makes up dreams for Dr Joyce (because he is ashamed of his feeble memory), it is clearly visible that his creations are an artifice rooted in a folk theory of dreams. His characters are thoroughly self-reflective (17), and this is why Dr Joyce looks "profoundly unconvinced" (20). Real, non-lucid dreamer has glaring cognitive defects, which he is unable to comprehend (Hobson, "The William James Lectures" 39), and Alex may serve as a perfect example of this phenomenon. He does not realise that the man shown lying on a hospital bed is he himself (Banks, *The Bridge* 40), while the barbarian is absolutely single-minded, unable to logically infer the reason for events happening around him. When during one of his conquests he cannot find the source of smoke rising in the air, the familiar on his shoulder says:

You still lost? I thought so . . . A smarter chap would solve both problems at once by watching the way the smoke's drifting; it will try to rise, and there aren't many windows on this floor. Not that there's much chance of you making that sort of connection I imagine; your wits are about as fast as a sloth on Valium. (Banks, *The Bridge* 96)

As I have already mentioned, dreaming is considered as a form of support for the synthesis and activation of waking awareness. Brain-formed emotions, sensorimotor imagery and narratives together with a conviction that all things happening are real, create "a model of the world of truly remarkable similarity to the outside world itself" (Hobson,

“The William James Lectures” 64). Hobson argues that these processes are not enemies of consciousness, and that the function of dreaming is far from protecting awareness from unrealised impulses. On the contrary, dreams promote reality testing in an entirely virtual world mirroring the real one (“The William James Lectures” 69). Orr constantly exercises his motor reactions, while escaping from trains and jumping to “be damn quick” and outrun the bridge (Banks, *The Bridge* 190). Dr Joyce is convinced that dreams will allow Orr to regain his consciousness, and with it his sense of self (22, 25). In fact, in *The Bridge* subchapters bear the names of geological eras (Oligocene, Miocene, Pliocene), which mirrors the gradual evolution of the self in the novel. On its final pages, a unified “I” finally appears, which induces Alex’s waking:

I want to come back. Can I come back?
 beep beep beep this is a recording; your conscious mind is out at the moment but
 if you'd care to -
 clunk.
 Can I? Can I please? I want to come back. Now. Now we try. Sleep; wake. Do it
 now.
 Let's go there. (381-382)

The protagonist’s senses gradually awaken (384-385). Dreaming cures Alex and proves to be something Hobson calls “a treasure chest of supportive allies to the analytic, executive, and creative functions of the brain mind” (“The William James Lectures” 72). At the end of *The Bridge*, the ontological insecurity of Orr’s and barbarian’s experiences abruptly ends. The protagonist learns once again to “wanna do things”:

I want to go back to the Grand Canyon and get further than just the rim rock this time, I want to see the aurora borealis from Svalbard or Greenland, I want to see a total eclipse, I want to watch pyroclastic displays, I want to walk inside a lava tunnel, I want to see the earth from space, I want to drink chang in Ladakh, I want to cruise down the Amazon and up the Yangtze and walk the Great Wall; I want to visit Azania! I want to watch them push helicopters off the aircraft carriers again! I want to be in bed with three women at once! (379)

The sleeping brain is a marvelously plastic scenario generator. Thomas Metzinger (2009), a German philosopher, writes that “dreams are conscious because they create the

appearance of a world” (135). They consist of entirely believable images and narratives, which the brain considers as being true. The border separating the experience of being awake from entering a dream reality is artificial. At a certain point, the narrator of *The Bridge* notes that the outside world is just another dream: a collective one (380). Dreams form narratives and construction of each one is intertwined with the emergence of a sense of self.

3.9 CONCLUSIONS

Banks suggests that REM sleep experiences are a basis for the emergence of consciousness, and so are emotions and sensations. As *The Player of Games* progresses, Gurgeh becomes a brilliant Azad player obsessed with victory, anticipation and control. Mawhrin-Skel thinks that the reason for this change in Gurgeh is him speaking mostly Eächic language “which substituted sentimentality for compassion and aggression for cooperation” (Banks, *The Player of Games* 247), but it is rather the emotions and actions that accompany playing Azad that shape Gurgeh. Banks points to a tension between a safe world in which basic human predilections have to be suppressed, and a dangerous, cruel reality in which it is possible to act on the basis of emotions: feeling eager, self-aware, effective and important.

Within the perspective of neuro- and cognitive sciences, whatever people experience is a product of their biology: including consciousness and the sense of self. Banks shares this view. According to him, the complex brains make us what we are – as individuals and as a species. “In every domain of human life, the brain is the seat of knowledge, including the knowledge of god”, writes Tremlin (199). Banks perceives that the beauty and power of cognition, the astonishing intelligence of living sentient beings as grounded in the material, fragile body. Ultimately, in his novels sentient beings - be it humans or AIs - mean almost nothing (Palmer 80), but it does not mean that with the use of their innate biological or technological wiring they cannot create complex social structures, complex beliefs and appealing sets of values, or even gods.

CHAPTER FOUR: MACHINE MINDS

4.1 INTRODUCTION

As I argued in the previous chapter, the AIs consciousness and cognitive powers are subject to what Banks calls the Dependency Principle: they are always limited by their material structure, and dependent on the substrate they are embedded in. In other words, for Banks all consciousness is embodied: be it human, or machinic one. In fact, all the topics that I have raised within this dissertation (memory, religion, consciousness and self) can be analysed in relation not only to Banks' humans, but also to his machines.

Actually, I have already briefly commented upon this aspect in all parts of my discussion. In the first chapter I explained that in *Look to Windward* the Culture's Minds, unlike the Culture's organic citizens, are equipped with the capacity of total recall. I argued that by describing one of the AIs, who is constantly tortured by his indestructible and unchangeable remembrances, Banks emphasized the importance of malleability of memory, which is a crucial characteristic of the biological brain. In spite of the fact that in his discussion of memory in *Look to Windward* Banks contrasted the organic brains with the minds of the machines, his writings are, in fact, concerned more with the similarities and connections between the Culture Minds and the Culture's panhuman citizens.

In the second chapter of this dissertation, I discussed the characteristics the Culture's AIs share with the human beings, with special attention paid to religious thinking, the fear of death, and the drive towards immortality. I argued that the Minds are cognitively human-like: they desire to have long lasting impact on the universe, dreaming of unprecedented power and immortality. In other words, the Minds are anxious about their annihilation, even though they comprehend, as well as accept, the underlying materiality of the universe - themselves included.

It is evident that Banks devotes a substantial part of his works to the mindset and the cognitive processes of the machines. Even considering the fact that I decided to focus on the analysis of humanness in Banks' novels, it is impossible to ignore the technological protagonists of Banks' works. Moreover, I believe that the discussion of humanness would be incomplete without an overview of how the sentient machines work,

and what role they play in the Culture. Since the peaceful coexistence as well as a form of mutual understanding of humans and machines present in the Culture is peculiar, I would like to devote this chapter to the overview of the way the Minds' minds are structured, in order to delineate similarities between the cognitive processes of sentient biological organisms and sentient machines. I shall allude to the concepts already discussed in this dissertation, transposing them to the context of sentient machines in Banks' novels. Only then can I proceed to the conclusive part of analysis of this dissertation, which is focused on the issue of what makes humans human. In the scope of this chapter, I shall predominantly focus on the analysis of Iain M. Banks' *Excession*, supplemented with references to other Culture novels, such as *Look to Windward*, and *Surface Detail*. I will also briefly refer to the "Descendant", a short story included in *The State of the Art* collection. Nick Bostrom's book on artificial intelligence - *Superintelligence: Paths, Dangers, Strategies* (2014) often becomes my frame of reference, as the ideas outlined in it prove useful and insightful when applied to the discussion of Banks' novels.

4.2 BIOLOGICAL AND TECHNOLOGICAL MINDS: DIFFERENCES

Writing about Iain M. Banks' debut novel, *Consider Phlebas*, Gary Westfahl states that it is permeated by a "sense that humanity will never hold its own against superior machine intelligences" (207). This argument can be ascribed to Culture novels in general, *Excession* included. The discrepancy between the intellectual potential of humans and AIs in the Culture is unimaginably huge, and the ways the machines function are often drastically different from the ways in which the human minds work. Thus, before I proceed with discussing the similarities between the humans and machines, I wish to mention some of the major differences, which constitute an important background for the commonalities shared by two seemingly totally different kinds of sentient beings.

The plot of Iain M. Banks' *Excession* (1996) follows the Interesting Time Gang (ITG), an informal group of Minds, who are aiming at managing the Culture's response to the Excession of the title - a mysterious black-body sphere which suddenly appears in the Universe, resisting any attempts to probe it. The Minds are profoundly intrigued by the Excession, but so is the Affront, a race known for its cruelty and warmongering tendencies. When the Affront try to intercept Culture warships in order to use them to exploit or subjugate the mysterious object, the ITG instruct one of the starships, a General System Vehicle (GSV) known under the name of the *Sleeper Service*, to head to the Excession's location. The *Sleeper Service* demands in return that the man called Byr Genar-Hofoen meets his ex-lover, Dajeil, on the board of the ship. The humans were once in love, but due to Genar-Hofoen's unfaithfulness, Dajeil left him, finding forty-year long retreat on the *Sleeper Service*. The ship blames itself for this, and seeks reconciliation between the ex-lovers. Meanwhile, the warships stolen by the Affront approach the Excession. In order to stop them, the *Sleeper Service* deploys his own huge remote-controlled fleet. It soon becomes known that the Affront have been manipulated into the attempted siege by the ITG, who intended to use it as an excuse for an open war - since they regarded it as morally requisite to curb the Affront's cruelty. The novel's plot is concerned with the response of the Minds – each possessing distinctive personality – to the Excession itself and to the horrific brutality of the Affront.

In fact, not men, but machines serve as the protagonists of Banks' *Excession*⁷⁴. The plot is set thousands of years into the future, at a time when technology has evolved well beyond the reaches of technology we know, therefore each action can be performed by machines in an ultrafast and maximally efficient way. In other words, human intelligence has failed in confrontation with the rapidly developing artificial one. The first advantage the machines have over the organic beings is their data-storing and data-processing capacity. In the Culture, the Minds are capable of gathering, accessing and analysing gargantuan amounts of information, while the human characters can only refer to the results of these analyses. Iain M. Banks presents a world where vast amounts of information, including memories, or even brain states, can be materialised and saved in databases. This may be perceived as a facet of the phenomenon which has been taking place since millennia, and which recently significantly accelerated: human propensity to use external media in order to offload memory and other thought processes onto the world. In the late 20th and 21st century, machines such as computers or smartphones have been relieving humans of thinking processes on everyday basis⁷⁵. It is an erroneous conviction that humans should think about everything they do, that they should think more, and more deeply. Philosopher Alfred North Whitehead pointed this out early in the 20th century, stating that "civilisation advances by extending the number of operations we

⁷⁴ As David Pattie notes, "the humans in *Excession* ... are subsidiary to the main plot which is played out over their heads by the Minds" (25). The Minds' role in *Excession* was analysed by literary critics, such as Yannick Rumpala (2012), who focused on the political organization of a society dominated by artificial intelligences. Rumpala discussed the manner in which sentient machines are integrated into the collective sociopolitical life of the Culture, and Robert Duggan (2012) followed a similar critical path, arguing that *Excession* is a cornerstone in the development of the Culture's fictional civilisation, as it examines spatiality in the political context. In fact, there is a whole debate concerning politics of the Culture based on the discussion of *Excession*: Chris Brown (2001), Patrick Thaddeus Jackson and James Heilman (2008) analysed how far the Culture might be regarded as a politically consistent entity, and Farah Mendlesohn (2005) claimed that *Excession* is central to Banks oeuvre, because it is a classic reworking of the space opera genre intent on portraying a politically complex society with the use of the techniques of extrapolative fiction. I would like, however, to leave the political discussion aside, and focus on the character of the Minds themselves, and the particular traits and afflictions they share with the human beings in the context of cognitive facilities.

⁷⁵ Of course, people have always been using "the artifactual world of texts, diaries, notebooks, and the like as a means of systematically storing large and often complex bodies of data" (Clark 201), but the bulk of available data has never been as big as it is now, or as it was at the end of the 20th century. Andy Clark has argued for the existence of something he has called the "007 principle". According to his theory, evolved creatures are reluctant to storing or processing information in costly ways, if it is possible for them to use the environment as a substitute for the information-processing operations. In other words, men have always applied intelligence to shape the world in such a way that they "can be dumb in peace" (Clark 180).

can perform without thinking about them” (55). In other words, technological evolution invariably leads to a state in which humans don’t only do less, but also think less in a world of more and more intelligent objects.

In the Culture novels, including *Excession*, Banks admitted that this kind of technological change is imminent, and portrayed his human characters as intellectually passive, or even completely bland and having absolutely no impact on the surrounding reality, ruled and organised by AIs which long ago stopped resembling anything that could be designed by humans. People are no longer engineers, designers, creators or scientists - in the Culture, machines create and upgrade other machines with far greater efficiency than it could have been performed by any person. Engineering in *Excession* is like an evolutionary process with foresight, guided by superintelligent AIs. At a point in the novel, the reader follows one sentient drone’s thoughts:

[i]t was no ordinary machine; it was at the cutting edge of its civilisation's technology, designed to evade detection by the most sophisticated instruments, to survive in almost unimaginably hostile conditions, to take on virtually any opponent and to suffer practically any damage in concentric stages of resistance. That its ship, its own manufacturer, the one entity that probably knew it better than it knew itself, was apparently being at this moment corrupted, seduced, taken over, must not affect its judgement or its confidence. (Banks 19)

This sophisticated and independent machine was created by an even more refined and capable ones. Nevertheless, the Culture offers its humans nanotechnological augmentations, the most crucial of which is the neural lace. It is a sort of an implant, which grows with the brain, allowing, among all, for perfect recall, access to an information database, and saving memories, as well as personality traits in a digital form. This wireless brain-computer interface is something that everyone has – *Excession*’s main human character, Contact agent Ulver Seich, had never had any physical alteration “apart from the neural lace of course, but that didn’t count” (Banks 106). Another character in *Excession*:

[r]esolved to have his neural lace removed for the month of the Festival, deciding that as this year's theme was Primitivism he ought to give up some aspect of his amendments ... It was oddly liberating to have to ask things or people for

information and not know precisely what the time was and where he was located in the habitat. But it also meant that he was forced to rely on his own memory for things like people's names. And how imperfect was the unassisted human memory (he'd forgotten)! (Banks 187-188).

The hybrid, partially digital neuronal system dramatically outperforms the base, non-augmented brain. One could ask at this point, why are Culture humans not augmented to an extent that would allow them to match the machines in intelligence, subsequently forming a civilisation of biological and technological counterparts? The reason for the intellectual inferiority of human beings in Banks' novels is exactly the same as the reason in the real world: although human brains have significant plasticity, they are limited by their physical and metabolic constraints. Brains cannot be expanded in size. By contrast, "supercomputers can be warehouse-sized or larger" (Bostrom 59). As I have already stated, some Culture AIs inhabit gigantic interstellar ships – General Systems Vehicles – together with thousands of drones, humans, aliens, and other biological and non-biological creatures. AIs can also inhabit asteroids, or even whole planets, having immediate control over them, as well as direct access to limitless resources these entities provide.

As John von Neumann noted more than fifty years ago, the biological substrate is extremely slow (39-50), and "today's transistors operate on a timescale ten million times shorter than that of biological neurons" (Bostrom 44). Our capacity for analysing information and extracting meanings from data is rate-limited, regardless of how big a reservoir we access. This is the reason why we can, for instance, use search machines in digital libraries with millions of academic articles, and do it over the course of seconds – while our own minds would have to grapple with these same things for days on end. Banks' often emphasises the speed and computational capacities of the machines he is describing: in *Excession*, machines are the masters of "innumerable public storage systems, information reservoirs and databases containing schedules, itineraries, lists, plans, catalogues, registers, rosters and agenda" (Banks 231). "Eighteen fifty-three milliseconds" is long enough for a drone to perform a full systems check, scan the surroundings, review its state and have an insightful monologue (57-60). In fact, Banks' *Excession* abounds in fragments referring to the speed chasm separating machines from

human beings. “For a human a month was not that long; for a drone - even one thinking at the shamefully slow speed of light on the skein - it was like a sequence of life sentences”, writes Banks (93).

Both in the Culture and in our world, machines are fast, therefore their perspective on the external reality varies from the one available to slow-minded humans. Nick Bostrom speculates that “to such a fast mind events in the external world appear to unfold in slow motion ... Because of this time dilation of the material world, a speed superintelligence would prefer to work with digital objects. It could live in virtual reality and ... commune mainly with other fast minds rather than bradytelic, molasses-like humans” (53). More than twenty years before Bostrom wrote about it, Banks had envisioned an analogous situation in the *Excession*: when the Minds were not preoccupied with running ships, pacifying alien civilization, or governing the Culture, they spent their time in “fantastic virtual realities ... vanishingly far away from the single limited point that was reality” (140). “They imagined entirely new universes with altered physical laws, and played with them, lived in them and tinkered with them”, engaging in activities “far beyond the sagacity of the human mind” (139). The Minds called it the Irreal, or the Infinite Fun (140), which is a place where they could freely and fully apply their speed and intellect.

Thus, the Culture novels mirror our world in the following aspect: the human and the machine intellectual or data-processing capacities differ greatly. The amount of information AIs can store is virtually unlimited - whereas human long-term memory is weak, its storage capacity small, and the rate at which information is accumulated remains very slow (Bostrom 59-61). In the Culture, brains tire fast, decay quickly, and most of the data remains vulnerable.

It is now, I think, viable to ask why such powerful and intelligent beings as the Minds respect freedom of the vastly inferior humans? Why do they pay heed to the desires and needs of biological creatures? These questions are especially vital if one takes into consideration the fact that Culture machines often express slightly disdainful attitude towards the intellectually inferior biological beings. One of the drones states that it “never could stand the squidgy great slow lumps” (Banks, *Excession* 26), while another one postulates that it would never search for truth “inside the minds of mere animals” (52). If

not contemptuous, machines in the Culture are normally patronising: for instance, Genar-Hofoen's animated suit "looked after you perfectly but it couldn't help constantly reminding you of the fact" (Banks, *Excession* 31). If the AIs of the Culture differ so greatly, and if humans think slowly, act slowly, behaving like "mere animals", what makes the Minds tolerate the organic citizens, and even take care of their well-being?

4.3 BIOLOGICAL AND TECHNOLOGICAL MINDS: SIMILARITIES

In fact – in spite of their exquisite computing capacities, the AIs are not like computers, and they often behave human-like – they have individual characters and motivations, and express easily recognisable emotions. Paradoxically, more than any other beings in the Culture, Minds are faced with emotional strain, engaged in interesting ethical dilemmas and difficult intellectual challenges. Besides, they tend to have much more suggestive personalities than people – in *Excession*, for instance, the relationship between two main human protagonists, Dajeil and Byr Genar-Hofoen, appears bland and superficial in comparison to the plots in which the Minds are engaged. The newly recruited Special Circumstances agent, Ulver Seich, proves to be utterly irrelevant to the novel’s plot, while the narrative itself is concerned mostly with portraying a world in which machines deal with significant issues of which the biological population is blissfully ignorant. When humans “hatch little schemes and plots to their hearts’ content”, these are “practical jokes, petty jealousies, silly misunderstandings and instances of tragically unrequited love”, while the same phenomenon in case of the Minds means that they, for instance, hide from one another the discoveries of whole intergalactic civilisations, or “try to alter the course of a developed culture” (Banks, *Excession* 66). It is hard not to get the impression that in the Culture humans are superficial, and one possible reason for their existence in the scope of the novel is the fact that the reader would feel too estranged without their presence. I am intent to argue, however, that Banks’ aim in presenting AIs as more human-like and more relatable characters than human beings is more complex. It could be postulated that the human-like characteristics exhibited by the Minds lead to the consequent sentiment, empathy and respect for humanity and biological life, which in turn leads to the machines taking care of the inferior beings, instead of disposing of them. Such an empathetic attitude is not the case of *Excession* solely, but is clearly visible in other works set within the Culture. For instance, in the “Descendant” short story published in Banks’ *The State of the Art* collection, a technologically advanced and sentient spacesuit develops such an emotional attachment to its human owner, that even after the human’s death it is carrying his body around, not willing to dispose of it:

'When did he die?'

'Thirty-four days ago.'

'Why didn't you ditch the body? You'd have been quicker.'

The suit made a shrugging movement. 'Call it sentiment.' (n.p.)

In *Look to Windward*, Banks provides a brief, though crucial, account of the history of the development of AIs in the Culture, where he states that “if you were constructing a sentience that was or could easily become much greater than your own, it would not be in your interest to create a being which loathed you and might be likely to set about dreaming up ways to exterminate you” (126). For the purposes of this discussion, this is a passage of great importance. Banks explains that the Culture’s AIs “reflect the civilisational demeanour of their source species”, so that there always stays a part of the character of the precursor species in the newly created being. Subsequently, Banks mentions instances in the intergalactic history, in which various civilisations attempted at devising AIs with no elements of their own psychology, their own morality and values. Such sentient entities were known as the perfect AIs, and what characterised them was the choice to leave the material dimension entirely in order to Sublime (*Look to Windward* 126).

Therefore, it can be argued that what prevents the Culture’s Minds from Subliming, and entices them to care for the material world instead, stems from the characteristics they share with the human beings: their fear of death and the drive towards becoming symbolically immortal. Since I have already discussed this aspect in more detail in the second chapter, now I wish to focus on the emotionality of the Culture’s machines, which I consider as the issue that should be expanded within the discussion of human-like characteristics of the Culture’s AIs. In all his science fiction novels, Iain M. Banks is referring to “sentient machines”, and not “artificial intelligences” or “self-aware devices”. “Sentience”, linguistic-wise means an ability to feel and perceive. Of course, the OED’s science fiction citations site contains examples as old as the 1920s in which the meaning of “sentient” is “intelligent”, as opposed to the standard “feeling”. Thus, according to the Science Fiction Citations for Oxford English Dictionary, “machine sentience” has been used as a fixed expression through most of the history of the science fiction genre (n.p.). In *Look to Windward*, however, Banks describes one of the Culture’s

machines in the following way: “the machine was merely clever, not sentient. It would probably not have been able to recognize the emotions behind his words anyway, even if they had been communicated” (47). Thus, it may be argued that Banks implies here that the ability to feel and read emotions constitutes the prerequisite for sentience, and is a non-disposable element of what we call consciousness.

But, even if the discussion of the rationale behind the use of the term “sentience” is left aside, there is little doubt that Banks’ Culture novels are full of feeling devices. First of all, the drones’ emotionality ought to be mentioned: while not anthropomorphic in any way, the drones are built with an aura or field which changes color to reflect their current emotional state. It can, for instance, be “yellow green with calm friendliness” (Banks, *Excession* 103), or have “a sort of a muddy cream colour to indicate embarrassment” with “a few flecks of red” to communicate it is hardly acute (Banks, *Look to Windward* 24). The drones sometimes die with feeling “a mixture of sorrow, elation, and a kind of desperate pride” (Banks, *Excession* 137). Banks uses a lot of vocabulary used for describing emotions when he is referring to the AI characters. Just like the drones, the Minds in his novels are very emotional beings. In *Excession*, lengthy descriptions are devoted to the feelings of the Minds who encountered the Out of Context Problem (104, 244). Nevertheless, all of them know that what they are experiencing are “real emotions”, which one can be “annoyed at, ashamed of and indifferent to” (272). *Excession* abounds in references to “angry” or “prideful” AIs, ones that possess “wounded self-esteem” (376), while the Sleeper Service’s motivation for bringing Byr and Dajeil back together remains especially poignant. He is the one who permitted their love affair to blossom and, as a result, feels a deep sense of regret when the lovers part, trying desperately to reestablish their relationship:

The woman shook her head.
 'I've thought about it. I don't want to see him.'
 The avatar stared at Dajeil. 'But I brought him all this way!' it cried. 'Just for you! If you knew...' Its voice trailed off. It brought its feet up onto the front of the seat, and put its arms round its legs, hugging them. (373)

The feelings aimed at human citizens of the Culture constitute a substantial part of the AIs emotionality. Banks admits that the Culture would never sacrifice any sentient being

while having a possibility of solving a burning issue in a different way. He often mentions the Culture's bizarrely sentimental attitude to life, and engages on vivid descriptions of ships, such as the Sleeper Service, which construct collections of habitats brimming with living creatures to be cared and catered for. Ships take pride in, and attribute pleasure to, maintaining physical and mental well-being of their inhabitants. They enjoy providing the inferior organic beings "an environment they would each find comfortable, pleasant, stressfree and stimulating", while it is their duty "to talk to them and empathise with them" (Banks, *Excession* 390). The AIs consider protecting a "quaint circle of fragile little bodies and the vulnerable little brains" as their obligation, while some Minds admit that they will sacrifice their own lives in order to protect the human beings (Banks, *Look to Windward* 317).

This all sounds very grave, but the Minds are, in fact, far from being serious and austere creatures: the propensity for play is crucial in the context of the Culture AIs. Nick Bostrom speculates that while play occurs in multiple animal species, humans included, in the case of AIs "the need for playful behavior might become less widespread" (175), because it will not be useful, as AIs would possess fully developed consciousness and a mature repertoire of skills from the moment of their creation. Still, Banks' Minds are different from the AIs imagined by Bostrom: they are very much inclined to engage in playful behaviors. For instance, in *Excession*, the Sleeper Service uses the people in their Storage suits to construct enormous art- or battle scenes:

When it Stored people it usually did so in small tableaux after the manner of famous paintings, at first, or humorous poses; the Storage suits allowed their occupants to be posed in any way that would have been natural for a human, and it was a simple matter to add a pigmentation layer to the surface which did such a good job of impersonating skin that a human would have to look very closely indeed to spot the difference. Of course, the ship had always asked the permission of the Storees in question. (83)

Banks states that all Minds enjoy play and they value feelings associated with it very highly. The AIs' playfulness does not only have emotional importance, though: in case of the sentient machines it is often associated with their willingness to plot and the weakness for the occasional misdemeanor (Banks, *Look to Windward* 127). Playfulness contains the

element of love for intrigues and plots, as well as the inclination to scheme and to plan, to read out others' intentions, motivations and desires.

The prerequisite for this kind playful plotting and manipulative behavior, as well as for understanding and empathy, is possessing a universal Theory of Mind. The sentient machines in Banks' Culture novels definitely possess it, being able to decipher other's intentions and predict their behaviour. The Minds are not only perfectly capable of guessing the thoughts of other Minds, but they also take pleasure in it. In *Surface Detail*, Banks mentions an instance of a powerful warship in a disguise of a less advanced one, who is being followed by another machine. The more advanced entity supposes that its follower "thinks that there isn't the slightest chance" that it can be seen, that is why it is moving so close behind (408).

The emotionality of the sentient machines is a thing that they share with the human beings, and so is their attitude towards the body – their own and their biological citizens. Even though in Banks' writings the biological substrate is at the very bottom of the evolutionary ladder, because it is slow and "wastefully large" (Banks, *Excession* 20), it is essential:

[w]hen that way [technological] - the relatively easy, quick and simple way - was closed to the inquirer for some reason, usually to do with keeping the inquiry secret, things had to be done the slow way, the messy way, the physical way. Sometimes there was no alternative. (Banks, *Excession* 231)

Neurons constitute a "final-resort back-up" (Banks, *Excession* 94). Nevertheless, sentient machines possess some quasi-organic parts in their almost completely technological bodies, which proves that they have respect and sentiment towards biological beings. They tend to take advantage "of useful aspects of the human brain's behavior – like its intrinsic pattern recognition, on-target concentration and flinch responses" (Banks, *Surface Detail* 433).

The Culture's Minds also normally assume the form of an avatar: a human-shaped construct used to interact with humans, which can be realistic enough to fool real humans at close range or even to fool another Mind. Avatars can be also separated from the Mind itself, becoming autonomous superhumans. Ordinary people can serve as avatars too, if

that is what they wish for. The fact that the Minds incorporate the form of a human body, and communicate through it with non-machinic citizens, proves how important it is for them to establish a connection between humans and themselves. It can be argued that the Minds become embodied in order to feel more, to be sentient and conscious in a way that resembles the humans, and to understand humans better thanks to the possibilities offered by direct contact. For instance, the avatar of the Sleeper Service called Amorphia is “a gaunt, pale, androgynous creature, almost skeletally thin and a full head taller than Dajeil” (Banks, *Excession* 5). Amorphia is behaving in a manner which is relatable and understandable for a human being: it smiles as though uncertain or bows the head in a gesture of greeting. With such descriptions of avatars, Banks emphasises the fact that the Minds understand the working of the human body and can relate to it. Avatars are mirror images of organic beings (not always humans): Banks implies empathy exists only if one can imagine the other being as similar to one’s own self. Thus, the Culture Minds must have an idea of the self, which, as I explained is a potent illusion shared by human beings. The drones, however, can relate biological beings and do possess a sense of self, too: one of the drone characters of *Excession* acknowledges that “if it had been a human, its mouth would have gone dry” (Banks 135).

The importance of having a specific body is vital not only in case of the Culture’s organisms, but is also important in case of its AIs. Each drone has a specific physical make-up which corresponds with its personality. In *Look to Windward*, drone Tersono is embodied in a looming one metre-tall piece of metal, which makes it look old, as if it “had been constructed millennia ago”, but actually Tersono is only a few centuries of age (Banks 21-22). He enjoys surrounding himself with old things, and likes the feeling of being in a specific, consciously-chosen body, which allows for interacting with others while being enmeshed in a particular shape. Generally speaking, the bodies of the Culture machines are widely varied and always individualised. The Minds inhabit, for instance, intergalactic ships which serve them as easily modifiable bodies, other machines live in planets or halo-shaped artificially-created worlds called Orbitals. All of these entities provide convenient bodies for a Mind, which is too large, too complex, and too important to be contained within a smaller shell. Most of the Minds choose huge vessels, because they provide them with the capacity for action and physical movement, which is essential,

since Minds are conscious beings exhibiting curiosity, emotions, and drives of their own. Already in 1994, in *A Few Notes on the Culture*, Banks explains that “Minds bear the same relation to the fabric of the ship as a human brain does to the human body” (n.p.). The vessels most commonly described by Banks – and at the same time encountered in the Culture in enormous numbers – are the General Systems Vehicles (GSVs). The GSVs are very fast, inhabited by millions of people and sentient machines, and representing the Culture’s ideals, in which different spheres of consciousness and materiality are interconnected, and the machinic and organic lives stay ceaselessly intermingled.

Even though the Minds spend most of their time in Virtual Reality space (nicknamed by them the Land of Infinite Fun), in which they can become so immersed that they “could forget that there was a base reality at all” (Banks, *Excession* 140), they still have to rely on their physicality. Becoming too enamored with the virtual can be dangerous for the Minds: while losing contact with the “base reality”, they become vulnerable, weak, and easy to destroy. Banks pinpoints the fact that a Mind is “just like some ancient electricity-powered computer; it didn’t matter how fast, error-free and tireless it was ... if you pulled its plug out, or just hit the Off button, all it became was a lump of matter” (Banks, *Excession* 141). The Culture’s AIs are dependent on their bodies and rooted in material existence. Their being is “like the dependency of the human-basic brain on the human-basic body” (141), states Banks, emphasising the similarities between biological and technological structures, and the ultimate materiality of all creatures inhabiting the Culture. The Minds are basically matter-based beings with highly developed intellectual capacities. They are embodied, and they understand the importance the body plays for them and for the human citizens.

This sentiment for the material sphere and for maintaining bodily contact is especially visible when the phenomenon of Fleeting is considered:

Fleeting was when two or more ship Minds decided they were fed up being all by themselves and only being able to exchange the equivalent of letters; instead they got together, keeping physically close to each other so that they could converse. (Banks, *Excession* 216)

Such communication on the part of the AIs is absolutely inefficient and tremendously slow, and serves only to fulfill the need of – literally - staying in touch with other material entities of similar properties.

4.4 CONCLUSIONS

Banks observes that the notion of consciousness is not reserved for biological organisms. In order for it to come into being, one primary condition has to be fulfilled: matter has to reach a sufficient level of complexity. Therefore, in the Culture Banks presents a universe populated by various machines capable of thinking, feeling, and originating creative ideas. As one of the drones notes: a computer's mind is very similar to the human mind, since it "is also made up of matter, but organised differently" (*Use of Weapons*, 256). Banks' fiction undoubtedly exhibits a preoccupation with the idea of consciousness arising from material structures.

In spite of all the structural variety, and the differences in data-processing capacities, the humans and the AIs share multiple commonalities, such as their inherent emotionality and dependency on the body. This study, whose aim was to briefly delineate possible convergences between the workings of biological and artificial minds in the scope of Culture novels, could be further extended by analyzing each aspect of their shared cognitive features in more detail, tracing the chronological development of Banks's ideas in his science fiction novels.

Nevertheless, I believe that via the introduction of cognitive similarities shared by humans and machines, Banks ceaselessly entices the reader to ask what humanness means, and whether being a human has a value in itself. The Culture is shaped as a post-anthropocentric society, in which the subject/object dualism is questioned, as devices commonly possess self-awareness and agency. Banks emphasizes the machines' embodiment, describes their dependence on the environment and their close, emotional relationships with biological subjects in order to blur the biology/technology and nature/culture dualisms. He tirelessly dissolves of the discrepancy between organic and non-organic entities, expressing his monistic, materialist and egalitarian perspective.

CHAPTER FIVE: STORYTELLING

5.1 INTRODUCTION

In the preceding chapter, I have refrained from analysing one prominent characteristic of the AIs in Banks' novels - their propensity for linguistic communication and the subsequent ability to organise experience in the form of stories. I did it on purpose, as I shall devote more attention to the topic of narrative creation in this final, concluding chapter.

Thus, it is important to begin with emphasising that while Banks' AIs freely change their own bodily shape and the shapes of the human beings, there is one thing ultimately private in the Culture: thought and memory. With these two AIs do not interfere. As Banks put it, "practically the only form of private property the Culture recognized was thought, and memory ... It was considered the ultimate in bad manners even to think about trying to read somebody else's - or something else's - mind" (Banks, *Excession* 66). Just like for human beings, the contents of the mind are for the AIs the most valuable aspect of existence - the foundations of self⁷⁶. Even though the Minds severely interfere with the Culture citizens' existence, the people are mostly left on their own when it comes to their own psychosocial development. To provide an example - in the case of *Use of Weapons*, no one interferes with Zakalwe's memories. His mind is freely creating the self-serving fiction out of past traumatic remembrances. The Minds have no intention of stopping nor altering this process.

What does this attachment to the privacy of thoughts and memories mean? One of the Minds states that refraining from reading or directly changing a human brain "is probably the most profound manner in which we honour our biological progenitors" (Banks, *Look to Windward* 249). The Minds understand that consciousness and the sense of self is very much like a story, created and re-created on the basis of experience, thoughts, and memories. They honour and appreciate those stories of the self. And even

⁷⁶ There are, of course, entities that do not respect this rule of privacy: the ship Grey Area, for example, "did what the other ships both deplored and despised; actually looked into the minds of other people" (Banks, *Excession* 70). Nicknamed Meatfucker by the other Minds, the Grey Area was an outcast, lacking respect due to its revolting hobby.

though such respect appears quite peculiar in the case of the Culture's AIs, it is, in fact, a form of homage paid to the very basic phenomenon that characterises the human mind: the cognitive capacity for language, and, consequently, for storytelling⁷⁷.

The cognitive capacity for language and storytelling pertains to be mentioned as a uniquely human trait⁷⁸. We are the only ones who write books about the world, and who transmit knowledge in stories. We can create fictional worlds and fictional characters, which are the reflections of the real. Via language, humans offload knowledge onto the external world, which, among all, allows for technological advancement and socio-cultural life unprecedented in its complexity. Scientists agree that humans apply their biological capacities, such as the Theory of Mind, in order to understand the mental states of others, to integrate experiences into a coherent narrative of our life, to create the sense of self, understand the past, and predict the future. In other words, they are capable of storytelling. Antonio Damasio (2010) argues that storytelling belongs to natural cognitive functions of the brain, enhancing self-consciousness, as well as enabling highly social behavior indispensable for forming the fabric of culture (chap. 11, n.p.). No longer do we believe that we are unique due to the fact that we possess morality, free will, soul, or self-consciousness. It may be the advanced ability to form narratives that makes us uniquely human.

In this final chapter I argue that the exploration of different mental processes, as well as the analysis of how the idea of the self is created, leads Banks to a parallel conclusion: that is, Banks' believes that the propensity for storytelling is the limestone of human existence - both individual and social. In *Use of Weapons*, *Espedair Street*, and *Inversions* Banks considers narratives as the building blocks of his characters' identity. Therefore, I open my discussion with the explanation of how memories contribute to the emergence of self-serving fictions. Narrative construction is considered as very closely

⁷⁷ I am referring to storytelling as the phenomenon of creating and sharing stories, or – in other words – the propensity for building and transmitting narratives.

⁷⁸ Humanness is constantly being defined and redefined anew: for instance, as for the qualities that differentiate humans from other beings, multiple traits once believed to be unique for our species have also been discovered among animals. Cognitive sciences, together with computer science and animal studies, have incited a potent discussion of what makes a human being. This discussion, however, is far from being essentialist: it is already common knowledge that a species-specific general "essence" does not exist. Instead, as Donald Brown argues in *Human Universals* (1991), there are features of psyche, behavior or culture which are unique to humans.

related to the processes of memory, and even though I have described the workings of memory in more detail in the first chapter, I have refrained from delving into the narrative-related aspects, which I intend to raise now as this discussion fits into the overall course of the following argument. I propose that for Banks the self of his characters operates in stories. I have already explained that while human existence is limited solely to what the body experiences, the illusion of consciousness is born out of these sensations and feelings. This input chaos has to be somehow organised by the brain: thus, it is supported by narratives, which integrate the wild variety of things that each individual experiences.

I proceed to argue that Banks' characters not only have an unprecedented ability to create stories, but also to share them and to become immersed in the reality which these narratives convey (no matter whether they are real or fictional). This helps them to adapt to the varied and rapidly changing conditions of the world they exist in. Thus, I focus on the ways in which narratives enhance altruism and social cohesion in Banks' universe, while sharing stories among characters serves the purpose of transmitting knowledge and experience. Thus, I argue that one of the messages present in *Use of Weapons* or *The Crow Road* is that the phenomenon of storytelling is essential for the functioning of coherent societies and the development of culture. For Banks, stories are universal, because they appeal to the supposedly universal propensity of the human mind which allows for appreciation of narratives and their further transmission. In "Piece", Banks suggests that religions can spread so easily, because they traffic in texts, be it written or spoken.

It is important to once again point to the fact that not only Banks' organic characters exhibit a penchant for narratives: the AIs in Banks' Culture novels do too. In *Excession*, Banks explains that this is the most profound feature that connects sentient machines with biological beings, providing an anchor point for the whole society to hold fast together. Sharing stories of human adventures establishes relationships between the Minds, helps them understand the panhuman citizens better and empathise with them. The fact that the Culture society values storytelling may be the main reason for the peaceful coexistence (even cooperation) between beings differing so profoundly.

5.2 FRAMEWORK: NARRATIVE AND THE SELF

The textual nature of memory has been discussed at least since Sigmund Freud's "The Aetiology of Hysteria" (1896), in which Freud compares memories to uncovered historical ruins full of inscriptions. These inscriptions "reveal an alphabet and a language, and, when they have been deciphered and translated, yield undreamed-of information about the events of the remote past" (198). Later, in 1934, Walter Benjamin elaborates on Freud's metaphor of memory, arguing that the true medium of past experience is language, and proposing that memories can only be reconstructed within language, which is always highly subjective (314). In 1977, psychologists James Kulik and Roger Brown wrote the article entitled "Flashbulb Memories", in which they argue that the way we remember emotionally charged events is special, and it influences the way we narrate such memories (Favorini 322).

The connection between memory and narration is a perplexing issue. Similarly, the mutual dependence of memory and subjectivity has been haunting the minds of thinkers and scientists working in the field of life sciences. "While the remembered present is, in fact, a reflection of true physical time, higher-order consciousness makes it possible to relate a socially constructed self to past recollections and future imaginations", states Gerald Edelman (103), suggesting that the brain evolved memory as a creative power which builds an image of what already happened and what could happen - contributing consequently to the emergence of the notion of the self. In fact, such views about consciousness and identity do not pertain to neuroscience only, since "'person as memory in the brain' theory of identity has become the predominant position about personhood in contemporary Western and Westernized cultures" (Vidal 399). In other words, "the integrity of the self largely depends on the integrity of memory", no matter how true these recollections are (Vidal 402).

Thus, one link is believed to exist between memory and narrative creation, and another between memory and subjectivity. Still, there is also a third one, which connects subjectivity with storytelling. In fact, all these three notions have been considered as aspects of one phenomenon. Already in 1983, in *Elements of Episodic Memory* neuroscientist Endel Tulving approached the memories of personal events from the

perspective of the development of the self (Favorini 322), while in *Life as Narrative* (1987) cognitive scientist Jerome Bruner proposed a mechanism for the way in which narrating memories influenced self-formation, stating that “The culturally shaped cognitive and linguistic processes that guide the selftelling of life narratives achieve the power to structure perceptual experience, to organize memory, to segment and purpose-build the very ‘events’ of a life” (qtd. in Favorini 322). Contemporary neuroscientists agree with these theories: Daniel Dennett, for example, approaches the self as the “centre of narrative gravity” (*Consciousness Explained* 410). According to Dennett, our language capacities spin the story out of which emerges a “benign user illusion” – the self, mistakenly believed to be a single, conscious, inner entity (*Consciousness Explained* 311). Similarly, Antonio Damasio’s multi-level model of the self acknowledges the vitality of narrative creation⁷⁹.

⁷⁹ In *Self Comes to Mind: Constructing the Conscious Brain* (2010) Damasio suggests that simple organisms possess a proto-self mapping their being, more complex ones are equipped with a proto-self and a core self not dependent on language, thought or memory (and thus changing endlessly with every action and interaction), while the most complex one are equipped with the addition of an autobiographical self, which implies the capacity for autobiographical memory. According to Damasio, the autobiographical self lives the life narrative within which it is created. Therefore, the human self is based on different models: the first-person embodied perspective, the sense of agency, and the autobiographical memory connected with language allowing to narrate the story of the past, as well as to project future possibilities.

5.3 IAIN (M.) BANKS: NARRATIVE AND THE SELF

Put simply, memories are believed to be shaped into a narrative out of which self-awareness emerges. This happens regardless of the “realness” of the memories in question. Not surprisingly, remembrances, subjectivities and narratives have been treated as facets of one thing not only by people professionally studying the human brain, but also by writers⁸⁰. Iain (M.) Banks is no exception. Self-awareness of his protagonists may thus very well grow out of transformed, or even fake, memories. It is enough to mention Cheradenine Zakalwe in *Use of Weapons*, Daniel Weir in *Espedair Street*, and Frank Cauldhame in *The Wasp Factory*, all of which tell stories based on their often fictionalised memories for relationship- or self-serving reasons. While Banks’ *The Crow Road* is mostly preoccupied with the topic of identity understood as something that grows out of individual and collective memories, which are more or less permanent, Zakalwe’s identity is being shaped and re-shaped by fluid and changeable recollections. In case of *Use of Weapons*, the self is not a memory in the brain, but rather a work-in-progress, and imagination is in this case a faculty interrelated with memory.

In the neuroscientific, or cognitive context, confabulation is considered a normal, healthy process, which allows for preserving “a coherent identity over time by linking our current self to previous actions or events, to present our self to others as a unified being, aware of and responsible of our past actions” (Hirstein 218). Steven Shaviro draws on these ideas in his literary criticism, arguing that “most of what we think about ourselves is biased and inaccurate”, while “our psychological self-explanations are ... best understood as fictional narratives, or confabulations” (chap. 4, n.p.). In Shaviro’s opinion, this relates both to living human beings, and the characters or literary works, which are a reflection of us. Anyway, in *Use of Weapons*, Elethiomel is the master confabulator, obsessed with presenting, or retelling, his life as a coherent story, which would present him as a good, sensitive person. He ceaselessly creates stories referring to his past, and shares them with machines or other humans. These stories are drawing others’ attention: “The woman

⁸⁰ Tennessee Williams emphasised the fact that “stories ... may disguise themselves as memories, and memories – which are quasi or potentially narrative – may be altered in the crucible of narrative form” (qtd. in Favorini 324). Thus, Williams suggested the fragility of memory, the malleability of what is remembered, which opens the door for what is known as imagination.

listened. The drone listened. The ship listened. While he told them the story, of the great house” (356). Banks’ protagonist presents exhaustive and substantially emotional confabulations consisting of his remodeled memories, so that others may believe in him being the real Cheradenine Zakalwe. Confabulation serves here an identity-building function, and it also bears social significance. Banks’ protagonist shares the general human characteristic - the need to create a coherent, detailed story of a life, so that he can share them with others. In other words, he uses confabulations to form a narrative aiming at depicting him in a favorable way.

As psychologists Ian McGregor and John G. Holmes observe, storytelling always connotes “a certain slippage from the realities of the episodes it supposedly portrays, if not a wholesale bending of the facts to create a ‘good story’” (403). Each story requires adjusting the evidence to properly fill in the contours of a skeleton theme, and this means that lies, changes and inventions are indispensable. Consequently, “we lose the original and keep the copy” as the time passes (Schank and Abelson 34, 58), and stories told and retold substitute real memories. In other words, the copy equals a scheme guiding the recollections (McGregor and Holmes 403-404). We believe what we tell: in *Use of Weapons* Zakalwe behaves in a similar manner, internalising the story he has created. To phrase it differently, his memory tends to be biased for the evidence that makes his story coherent.

All stories are always filtered by the teller, and serve an almost therapeutic function of familiarising the mentioned narrator with their content. This is exactly the case of *Use of Weapons*, where Zakalwe is heavily obsessed about story-telling, which allows him to achieve much more than familiarising the listener with distant, exotic places. Zakalwe’s main aim is, in fact, to fictionalise his memories and, subsequently, to familiarise himself with all the newly-created fictions⁸¹. He builds his identity while compulsively telling stories created from the fictionalised, re-modelled memories he possesses:

And he told her, sometimes, about another time and another place, far away in space and far away in time and even further away in history, where four children

⁸¹ When other works by Banks are concerned, Katarzyna Pisarska discusses the familiarising power of story-telling in *The Crow Road* (151-152, 198).

had played together in a huge and wonderful garden, but seen their idyll destroyed with gunfire ... Finally, when he had almost talked himself to sleep, and the night was at its darkest, and the girl was long since gone to the land of dreams, sometimes he would whisper to her about a great warship, a great metal warship, becalmed in stone but still dreadful and awful and potent, and about the two sisters who were the balance of that warship's fate, and about their own fates, and about the Chair, and the Chairmaker. (Banks, *Use of Weapons* 70)

Banks seems to be far from ascribing special value to the truth and adequacy of recall. According to him, fabricated and half-imaginary memories of his characters are by no means less influential than those exact and fully factual. To him, imagination and creativity supports adaptive, identity-building functions of memory, together with its story-telling potential. This outlook goes in line with the discoveries made in the field of neuroscience:

When a meta-analysis of brain imaging studies asked which categories of cognitive tasks led to similar activation patterns in waking, it was found that envisioning the future (prospection), remembering the past (recall of autobiographical memories), conceiving the viewpoint of others (theory of mind), and spatial navigation utilize this same core brain network. ... [T]hey suggest a striking conclusion — that narrative construction *is* the default mode of the brain. (Stickgold 90)

To sum up, characters such as Zakalwe are not only unreliable narrators: they are often shaped by the stories they tell. It could be argued that the individuals described in Banks' literary works actively engage in self-communication, which may be defined as passing on identity created in a narrative. In my opinion, Banks' focus on such mode of communication mirrors his solipsist perspective on the human being. Personal feeling and reasoning are the only means of access to the world, and humans exist as images, or stories, in the minds of others. In *Inversions* (1998), a science fiction novel loosely related to the Culture, Banks develops this idea, introducing a narrator who emphasises the fact that stories offer ruminations on the meaning of perspective. He observes that "truth ... differs for everybody" and that "truth is a question of where one stands, and the direction one is looking at the time" (chap. 2, n.p.). Banks implies that there are no universally true accounts and no impartial narratives, because the access to the reality is limited, filtered

through what the body experiences, and how the mind interprets it, in order to organise the chaotic (often surplus) sensations and events into a coherent self-serving story. Banks refers to the malleability of memories, and the fact that we remember things erroneously, “for a goodly part of our lives ... giving a perfectly plain account of some post occurrence, one that we are quite sure of and seem to remember well indeed, only to come across our own written account of it, recorded at a time, and find that it did not happen the way we remembered it at all” (*Inversions*, Epilogue). Nothing can be done about this: the quest for truth is futile, lives traffic in narratives, and all these narratives contain elements of fiction⁸². The only thing left to do is to live on and actively apply ourselves to the world, which means an intertwined process of recalling the past and foreseeing the future in order to cope with the demands of the present, even if in the process “we convince ourselves that the past, present and future are much more knowable than they really are or can ever be” (Banks, *Inversions*, n.p.). In Banks’ opinion, the narratives which humans create help them retain sanity and integrity - even if they become fictional to a certain extent. Banks would agree with Steven Shaviro, who postulates that “sentience itself is arguably a matter of generating (or being able to generate) fictions and fabulations” and that cognition as well as consciousness could not exist without them (Introduction, n.p.).

Also in *Transition*, Banks shows that the borders separating reality from fiction are illusory. The only reality is the image created by an individual’s mind. This is why Banks develops on the ideas related with solipsism in this particular novel: what can be treated as the power of the mind – the ability to be immersed in an endless variety of worlds – is also its limitation, because nothing exists outside the mind and the illusion of the self it creates. It is impossible to grasp the greater picture of reality, or to be an objective, non-engaged observer of things happening around you. Hence, *Transition* may be considered a novel on the powers and limits of consciousness and the idea of the self, which - once created – are the only reality which we can have access to. As Caroti notes, “in the Culture, the basic attitude toward Life’s Great Questions (Why are we here? Where are we going? Why do we have to die?) is that asking such things of an essentially mechanistic universe is meaningless”. The most basic and crucial principle behind the

⁸² Caroti analyses *Inversions* as an openly metafictional novel focusing primarily on the phenomenon of storytelling, where everyone is a narrator aware of their performative role (142-154).

existence in the Culture is that all we can do is create our own meanings, and there is no escape from these creations. On the one hand, nothing really matters, but on the other – everything does, as humans can only access their own created meanings and illusions: of the self, of their past, of personal importance in the grand scale of events.

5.4 FRAMEWORK: STORIES AND CULTURE

According to Partick Colm Hogan, the existence of narratives proves that there are intrinsic psychological characteristics that unite us, in spite of the contingencies that differentiate cultures, nations, and epochs (4). There are stories that can be universally appreciated, and it may mean that there is something very basic about narrative reception and transmission. Antonio Damasio argues that in the history of humanity, storytelling (intertwined with the emergence of consciousness), began to serve as the ultimate solution allowing for transmission of emotions and wisdom (*Self Comes to Mind*, chap. 11, n.p.).

According to Damasio, feelings present in stories have survival value for whole societies, since they help individuals enhance their sense of self and cope with the world (*Self Comes to Mind*, chap. 11, n.p.). “Biology and culture are thoroughly interactive”, points Damasio (*Self Comes to Mind*, chap. 11, n.p.). In his book *Comeuppance: Costly Signaling, Altruistic Punishment, and Other Biological Components of Fiction* (2008), William Flesch argues that possessing the capacity to learn through the experiences retold by others is crucial for human existence in a chaotic reality, and narratives can thrive only thanks to strong emotional content and the delights the stories invoke (9). People do not learn dispassionately: anxiety, euphoria, curiosity, anger, desire or playfulness all underlie curiosity and enable spreading crucial information about the world (Flesch 11), while vicarious experiences underlie direct ones and contribute to sociality (Flesch 33). Human desire to track others grows out of what evolutionary theorists call “strong reciprocity”, which means the innate need to find and punish the guilty in order to maintain social cohesion (Flesch 21-22). Flesch notes that humans tend to get anxious about the fate of fictional characters as though we were caring about real people (11). Thus, we admire stories’ heroes, and it does not matter whether we classify them as real or fictional.

While implicit storytelling, or organising experiences and memories into “a movie-in-the-brain”, creates people’s selves, explicit storytelling exhibits a highly social function due to its emotional content. In other words, stories form the fabric of culture (Damasio, *Self Comes to Mind*, ch. 11). Richardson notes that fiction has the power to influence real-world beliefs, changing people’s ideas and attitudes (288). Life sciences

acknowledge or even emphasise the power of narratives as something that is uniquely human – which is on the one hand innate and naturally connected to the mental faculties only we possess, but on the other hand contributes to an almost miraculous phenomenon, the development of cultural structures unprecedented in complexity.

5.5 IAIN (M.) BANKS: STORIES AND CULTURE

Interestingly, in Banks' novels a penchant for sharing narratives pertains especially to the AIs. Language plays a vital role for the Culture machines: the Minds use the Culture's language, *Marain*, not only to communicate with the citizens, but also to have conversations in their own circle. They are especially fond of using *Marain* to create word puns and whimsical names for themselves, such as "I Blame Your Mother", "Unacceptable Behavior" or "Serious Callers Only"⁸³. Communication, however, is not the sole function of language in the Culture: it allows both humans and machines to create and share stories. Narratives are what the Minds value, and storytelling is a universal phenomenon, which aims at establishing connections between all kinds of sentient beings. In *Excession*, one of the Minds admits that what distinguishes each new sentient ship are three things: its own crew, personality, and its own story (Banks 390). The empathy and care the machines exhibit towards others is closely related to the ability to talk with them and the interest in the stories that they are willing to share. A Culture's Mind states:

It was also my duty to get to know those ships, drones and people, to be able to talk to them and empathise with them (...) In such circumstances you rapidly develop, if you don't possess it originally, an interest in – even a fascination with – people. (Banks, *Excession* 390-391)

It is, thus, a primordial trait of a sentient machine - its "duty" – to communicate with other beings and, consequently, to engage in an empathetic behaviour. The Mind admits that the use of language as well as narrative construction is the first step to develop interest with human beings. Storytelling is something constitutive, both for social life, and for personality, because once you engage in it:

[y]ou have your likes and dislikes; the people you do the polite minimum for and are glad to see the back of, the ones you like and who interest you more than the others, the ones you treasure for years and decades if they remain, or wish could

⁸³ This attachment to linguistics is something considered as very human: many of the theoretical ruminations on the future of AIs have contained the argument that computers "would never master the subtleties of human language, including metaphors, similes, puns, double entendres, and humor" (Kurzweil ch. 7), but what Kurzweil suggests is definitely not the case of the Culture's sentient machines.

have stayed longer once they've gone and subsequently correspond with regularly.
(Banks, *Excession* 391)

Storytelling and conversation enhances emotional engagement, allowing for the development of certain feelings and attitudes. The propensity for storytelling which the Culture's machines exhibit is very useful: it holds fast the whole huge intergalactic society. Retelling the stories of human lives incapacitates establishing close relationships between the AIs: they eagerly "trade tales with other GSVs, other Minds – gossiping, basically – to find out how relationships turned out, whose careers flourished, whose dreams withered" (Banks, *Excession* 391). The Minds of the Culture are fascinated with stories, they want to learn and share them. This helps the AIs to understand the biological citizens of the Culture, and to develop empathy towards entities profoundly differing from them. Simply put, storytelling glues Banks' intergalactic society together and allows it to develop and progress, as the narratives gathered and shared constitute an especially cherished part of the data resources the Culture possesses. In other words, according to Banks, stories boost not only the emergence of the idea of consciousness and the self, but they also propagate the emergence of societies: they bear strong emotional content, and may enhance altruism, empathy, and social cohesion. This goes in line with the arguments forwarded by Damasio and Flesch.

The whole *The Player of Games* is a first-person narrative told by the drone accompanying Gurgeh on his long journey. Both characters feel the compulsion to share their stories with others, offering unique perspective and transmitting experience. Banks suggests that if society such as the Culture is based on stories created, told and retold, then consciousness is the prerequisite for the emergence of cultural life, which thus may be understood as a radical biological revolution in human history. With his argument that storytelling is so important for the futuristic, ultra-advanced Culture, Banks implies that regardless of scientific, technological or social circumstances, storytelling may prove to be vital in the survival of societies and cultures. In general, Banks' literary oeuvre is permeated by a belief that the purpose of life is transition and transmission, understood mainly as planting of stories, memories and knowledge into other people, so that we "continue in our children, and in our works and in the memories of others; we continue in

our dust and ash” (*The Crow Road* 484). And the stories that are planted and transmitted in the realities Banks describes are often related to religion.

It can be argued that the universal drive towards immortality, or the construction of gods and belief systems, is universally human. This may be, however, incapacitated by something even more deeply universal - the ability to tell stories and create narratives. Human language capacities and the propensity to create stories have already been associated with religion. Johns Hopkins University neuroscientist David Linden states: “Our brains have become particularly adapted to creating coherent, gapfree stories and ... this propensity for narrative creation is part of what predisposes humans to religious thought. ... Our brains have evolved to make us believers” (225, 232, 234). Banks often emphasises the fact that religions operate in stories, in narratives, and that this is why religions have such a powerful influence on whole societies. Already in the short story “Piece”, the narrator, Mr Munro, observes that religions traffic in texts, and these texts are created by “scholars and monks and disciples and historians” who are not inspired by God, but rather “by something from inside them, something every writer has ... in fact something every human has” (*The State of the Art*, n.p.). Thus, religions revolve around stories, and storytelling is both universally created and universally appealing. In “Piece”, another character, Mo, is outraged by Salman Rushdie’s *The Satanic Verses*. According to him, it does not matter that the novel is literary fiction, because the form and the official classification of a text is not important: the message is. In this narrative it is Allah who is insulted (*The State of the Art*, n.p.).

5.6 CONCLUSIONS

In an interview with Colin Hughes published in *The Guardian* on August 7, 1999, Banks stated: “I love plot, I love stories . . . I don’t want any of this post-modern shite, pal. I want a story, with an ending”. Thom Nairn claims that an asset of Banks’ work is his “fascination with the nature of stories themselves, and how and why they are told” (134). For Banks, storytelling organises experience, transforms it, and adds values to it. It allows for fictionalising history, be it on the personal, or on the grand scale. Banks treats narrative construction and transmission as the most profound and basic characteristic of human minds, and, as a result, whole societies. This appreciation of storytelling as the cornerstone of cultural existence underlies all his ruminations on other functions and abilities of the mind: no matter whether he writes about the nature of religion, the workings of memory, or consciousness. Banks observes that due to their biological capacities, humans can accumulate information and transmit knowledge in narratives, which allows for the existence of cultural life unprecedented in its complexity.

Banks makes a point that it does not matter how the story is named: be it a religious parable, or a piece of fiction, it still has powerful influence on the recipients, inciting strong emotional and intellectual reactions. The penchant for creating and sharing narratives equals for him the crucial and special trait which is universally human.

CONCLUSION

Let me at this point recapitulate my line of analysis. I began with postulating that Banks' main area of focus is the human being, and especially the human mind. Thus, I was looking for analogies between Banks' ideas and the ideas present in neuro- and cognitive sciences, believing that this approach can serve as a key to discussing Banks' oeuvre in a systematic and unified manner.

First, I illustrated Banks' take on memory and imagination, arguing that for Banks memory is closely connected with imagination: never truthful nor permanent, it serves as a potent creative power. Memories can be indefinitely transformed and imbued with fictive elements. This process retains the psychological integrity of Banks' characters, allowing for the re-shaping of narratives of the self.

Thus, I suggested that Banks is heavily focused on investigating the workings and functions of autobiographical memory, which not only allows for recollecting the past, but also for imagining various scenarios of the future. One of such imagined scenarios may be death - which, in turn, incites fear, and further the dream of immortality. This can be one of the innate grounds for religiousness. I postulated that Banks explores this topic in his novels – or, more specifically, I argued that Banks is preoccupied with the human cognitive foundations of religiousness. Having looked for those foundations, I focused on the mindset of Banks' AIs, which, according to me, are similar to humans when their fear of death and drive towards immortality is considered.

Next, I postulated that the discussion of the issues of memory, imagination, and religious thinking, provided me with a relevant introduction to the topic underlying all of Banks' novels - that is, the nature of consciousness and the self. I argued that sensations, emotions, and active perception are the building block of consciousness in Banks' novels. Thus, I observed that consciousness is a propensity of the material body of Banks' characters. All the sensations, feelings and actions experienced and performed by the body are ultimately personal. They allow for the self to emerge: the self is always individual and subjective, and constitutes the inescapable human reality. I supplemented my discussion with an argument that for Banks dreams are also a state of consciousness.

After having focused predominantly on the human characters of Banks' novels, I devoted the next part of my analysis to the cognitive differences separating - and similarities connecting - the Culture's sentient machines with the panhuman citizens. I argued that even though the machines are much more powerful, their human-like cognitive build-up is responsible for the understanding and empathy they exhibit towards humans. I mentioned one crucial aspect in which the Culture machines resemble the biological beings – their propensity for storytelling. The capacity for narrative creation is, according to Banks, essential for the emergence of the sentient self, as well as for the functioning of coherent societies, and the development of culture.

Put simply, Banks believes that humanness is closely related to the phenomenon of storytelling, and he uses the characters of his novels to offer a discussion of what it means to be human. It does not matter whether the characters are organic panhumans or AIs, as the sentient protagonists of his novels share a common cognitive setup. All are material, embodied, embedded in their environment and highly emotional. All exhibit a penchant for organising experience in narratives, which they share with others and follow with interest. No matter whether Banks deals with biological or technological minds, he equips them with analogous mental processes and tools employed in interactions with others and the world. This convergence is essential in order for the peaceful cooperation and understanding between AIs and humans of the Culture to exist, Banks argues. At the same time, this strategy allows for regarding the sentient machines as a mirror to the biological characters. It can be argued that Banks points to the fact that the mental processes and the cognitive traits of the human characters, or even the grounds of their humanness, can stay unnoticed, because what pertains to the biological characters is so natural, so obvious, and so easily accepted. The sentient machines, therefore, characterised by their similarity to the biological minds and equipped with human-like cognitive tools, can paradoxically serve as a better explanation of what humans really are, and of what happens within human minds and bodies.

Still, Banks ceaselessly repeats that no matter what entity he introduces in his novels, they are all material, and matter is always a limitation, regardless of what convictions about power, agency, importance or intelligence may arise in a certain being. As I have just noted, the worlds Banks describes are populated by a multitude of very

varied beings which organise their existence by means of storytelling, and all share a similar cognitive setup. Their mental tools - especially the ones responsible for narrative construction – help them to weld their coherent selves, organise experiences and share them with others, or ascribe meanings to the events taking place in the surrounding world. The world, however, is a chaos of matter. As Lara Buckerton put it, Banks’ books illustrate a struggle between materialism and storytelling: “that is, between the obligation to the messiness of the universe, and the obligation to freight history with meanings and values which might distort and artificially neaten it” (73). At this point, I can argue that with his focus on human cognitive processes, as well as in his search for universals, Banks seeks an anchor in a world of fluidity and chaos. Just like his characters, he does search for stable tenets in an unstable reality ungraspable in its complexity - and seemingly devoid of purpose.

Even though Banks is writing about uncertainty, complexity, and the general lack of purpose, I would like to remind that he wants to exclude the “post-modern shite” from his novels. And even though he created very varied novels, writings which have been analysed separately, depending on their ideological content or generic affiliation, his literary output can be perceived as unified. In the realm of literary variety and difference, Banks is searching for connections. His anchor is the working of the mind, and especially the dimension related with the phenomenon of storytelling. This is why I suggest that an analysis Banks’ novels from the perspective of neuroscience or cognitive sciences grants the possibility for treating his literary output as unified. Such an approach has allowed me to look for universals within Banks’ writings, and to dig deeper - undistracted by the superficial differences.

Some could argue that not only life sciences are dealing with the mind, and that there are other, more traditional approaches, such as psychoanalysis, which could instead be employed in this project of unifying Banks’ work in search for universals. I would not agree, as only this approach has proved materialist enough in order to apply the philosophy proposed by Banks, and to converge with his perspective on the workings of the mind. I am well aware of the fact that my work contains numerous references to life sciences. This is, however, not an attempt at “scientifying” literature, nor do I suggest that such an analysis is better than the more traditional critical approaches. Literature portrays

and analyses the same mechanisms that brain and mind sciences speak about, but due to our Enlightenment-rooted belief in rationality and science, we are prone to grant less credibility to literature. I regard this as a misguided approach. Banks does too, imbuing his works with such a profound exploration of the powers of storytelling.

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Mind, Brain, and Literature: The Fiction of Iain (M.) Banks

Iain (M.) Banks never refrains from focusing on his characters: their thoughts, feelings, behaviour, and identity. While critics acknowledge the importance of character-building within Banks' fiction, existing criticism on Banks is heavily oriented on the narrative strategies he is using, and rarely focuses on the writer's preoccupation with the "celebration of the human" emphasised by Farah Mendlesohn (2005). The phenomenon Mendlesohn pinpointed became my primary point of interest, encouraging me to investigate what being human means within Banks' oeuvre. In order to achieve my aim, I decided to follow an interdisciplinary method which incorporates within my literary study texts originating from the fields of neuro- and cognitive sciences. This decision grew out of three interconnected observations: Banks is predominantly focused on the human; he is often investigating deeply culturally-established terms and metaphors associated with the human being (such as the ones associated with emotions, memory, or consciousness); and he is in favour of seeking universal laws and schemes -instead on concentrating upon the specific.

Thus, I treat Iain (M.) Banks' fiction as the groundwork of my discussion, which includes close readings of the relevant parts of his works: both mainstream and science fiction. I use scientific texts within my literary study as a key, which allows me to not indulge in genre criticism or stylistic discussions, but to approach Banks' oeuvre as a unified whole, focusing on persistent ideas and themes which Banks continues to explore. As Banks' main area of focus is the human being - or, as I shall argue, the human mind – brain and mind sciences are particularly useful. I am postulating that by paying close attention to the different brain-based processes, such as the ones responsible for memory, emotions or consciousness, Banks aims for providing an integrative perspective of the human being. In terms of the cross-disciplinary approach I am using, I am indebted to Steven Shaviro, whose *Discognition* (2016) has been an example of how fiction can be put together with neuroscience, psychology, and philosophy.

My analysis is divided into five chapters. I begin the discussion of Banks' fiction with a chapter on memory and imagination perceived as interconnected faculties of the mind. In the second chapter I discuss Banks' ideas concerning the cognitive nature of

religious thinking and the fear of death. In the third chapter I analyse the concept of consciousness and that of the self. In the fourth chapter I focus on the differences separating - and similarities connecting - the Culture's sentient machines with the panhuman citizens. The investigation of memory and imagination, religion, immortality and consciousness, as well as the discussion of the cognitive parallels between humans and machines in Banks' novels, leads me to a conclusion that there is one question underlying Banks' literary output: What is humanness? The answer is, according to Banks, the cognitive capacity for language, and, hence, for storytelling. I argue that for Banks, human cognitive powers amount to this unprecedented ability for the creation and sharing of stories.

Key words: Iain Banks, Iain M. Banks, The Culture, mind, brain, cognitive sciences, neurosciences, consciousness, self, storytelling, narrative creation, religiousness, memory, imagination

Umysł, mózg i literatura: twórczość Iaina (M.) Banksa

W swojej twórczości literackiej, Iain (M.) Banks zawsze skupia się na kreacji i prezentacji bohaterów – ich myśli, uczuć, zachowań oraz ich tożsamości. Jednak, mimo iż krytycy zaznaczają istotność kreacji postaci w fikcji Banksa, dotychczasowa krytyka skupia się przede wszystkim na strategiach narracyjnych wykorzystywanych przez pisarza, a rzadko na jego zainteresowaniu człowiekiem. Swoista „celebracja człowieka”, którą Farah Mendlesohn (2005) przypisuje twórczości Banksa, zachęciła mnie do zbadania, co to człowieczeństwo oznacza, i z czym się wiąże w jego twórczości. Aby osiągnąć swój cel, postanowiłam skorzystać z interdyscyplinarnej metody badawczej - wykorzystuję w moim studium literaturoznawczym teksty wywodzące się z dziedzin neuronauk i nauk kognitywnych. Ta decyzja była pochodną wysnucia trzech powiązanych ze sobą wniosków na temat twórczości Banksa: po pierwsze, pisarz skupia się głównie na człowieku; po drugie, zgłębia silnie zakorzenione w kulturze pojęcia i metafory związane z człowieczeństwem (m.in. z emocjami, pamięcią, czy świadomością); po trzecie, Banks jest zwolennikiem poszukiwania ogólnych zasad i wzorców zamiast koncentrowania się na studium przypadku.

Traktuję twórczość literacką Iaina (M.) Banksa jako podstawę mojej pracy badawczej. Rozprawa zawiera więc interpretacje fragmentów prozy Banksa – zarówno tej głównego nurtu, jak i tej wydawanej jako fantastyka naukowa. W procesie interpretacji tekstów literackich korzystam z tekstów naukowych. Metoda ta pozwala mi na rezygnację z krytyki rodzajowej i analiz stylistycznych na rzecz holistycznej analizy twórczości Banksa - ze szczególnym uwzględnieniem idei i tematów, które Banks niestrudzenie porusza. Jako że głównym zainteresowaniem pisarza jest człowiek – a właściwie rzecz biorąc, jego umysł – nauki o mózgu i umyśle są w tym kontekście szczególnie przydatne. Udowadniam, że poprzez skupienie się na różnych procesach mentalnych – na przykład na tych, które odpowiadają za pamięć, emocje, czy pojawienie się świadomości, Banks konstruuje holistyczny obraz człowieka. Na wybór takiej, a nie innej metody badawczej, duży wpływ miała praca Stevena Shavira pod tytułem *Discognition* (2016), w której to Shaviro zestawia fikcję literacką z tekstami z dziedzin neuronauk, psychologii oraz filozofii.

Moja praca składa się z pięciu rozdziałów. W pierwszym skupiam się na pamięci i wyobraźni rozumianych jako wzajemnie zależne zdolności ludzkiego umysłu. W drugim rozdziale omawiam podejście Banksa do myślenia religijnego i do strachu przed śmiercią. W trzecim rozdziale analizuję fenomen świadomości i tożsamości. W czwartym rozdziale koncentruję się na różnicach oraz podobieństwach między czującymi maszynami a biologicznymi organizmami w uniwersum Kultury. Analiza tematów regularnie poruszanych przez Banksa (takich jak pamięć, wyobraźnia, religia, nieśmiertelność czy świadomość), a także zbadanie jego podejścia do organizmów i maszyn, doprowadza mnie do konkluzji, że cała twórczość literacka Banksa podszyta jest próbą odpowiedzi na pytanie, czym jest człowieczeństwo. Według Banksa, odpowiedzią jest poznawczo-mentalna umiejętność tworzenia narracji. W twórczości Banksa ludzkie mentalne procesy przyczyniają się do wyłonienia się wyjątkowej i kluczowej zdolności do tworzenia opowieści i dzielenia się nimi.

Słowa kluczowe: Iain Banks, Iain M. Banks, Kultura, umysł, mózg, nauki kognitywne, neuronauki, świadomość, tożsamość, opowieść, narracja, religijność, pamięć, wyobraźnia